

CHAPTER 4

POINT AND NONPOINT SOURCE CHARACTERIZATION OF THE PICKWICK LAKE WATERSHED

- 4.1. Background.
- 4.2. Characterization of HUC-10 Subwatersheds
 - 4.2.A. 0603000502 (Bluewater Creek)
 - 4.2.B. 0603000503 (Shoal Creek)
 - 4.2.C. 0603000504 (Factory Creek)
 - 4.2.D. 0603000505 (Cypress Creek)
 - 4.2.E. 0603000506 (Tennessee River)
 - 4.2.F. 0603000507 (Second Creek)
 - 4.2.G. 0603000508 (Tennessee-Tombigbee Waterway)

4.1. BACKGROUND. This chapter is organized by HUC-10 subwatershed, and the description of each subwatershed is divided into four parts:

- i. General description of the subwatershed
- ii. Description of point source contributions
 - ii.a. Description of facilities discharging to water bodies listed on the 1998 303(d) list
- iii. Description of nonpoint source contributions

The Pickwick Lake Watershed (HUC 06030005) has been delineated into seven HUC 10-digit subwatersheds.

Information for this chapter was obtained from databases maintained by the Division of Water Pollution Control or provided in the WCS (Watershed Characterization System) data set. The WCS used was version 1.1 beta (developed by Tetra Tech, Inc for EPA Region 4) released in 2000.

WCS integrates with ArcView® v3.2 and Spatial Analyst® v1.1 to analyze user-delineated (sub)watersheds based on hydrologically connected water bodies. Reports are generated by integrating WCS with Microsoft® Word. Land Use/Land Cover information from 1992 MRLC (Multi-Resolution Land Cover) data are calculated based on the proportion of county-based land use/land cover in user-delineated (sub)watersheds. Nonpoint source data in WCS are based on agricultural census data collected 1992–1998; nonpoint source data were reviewed by Tennessee NRCS staff.

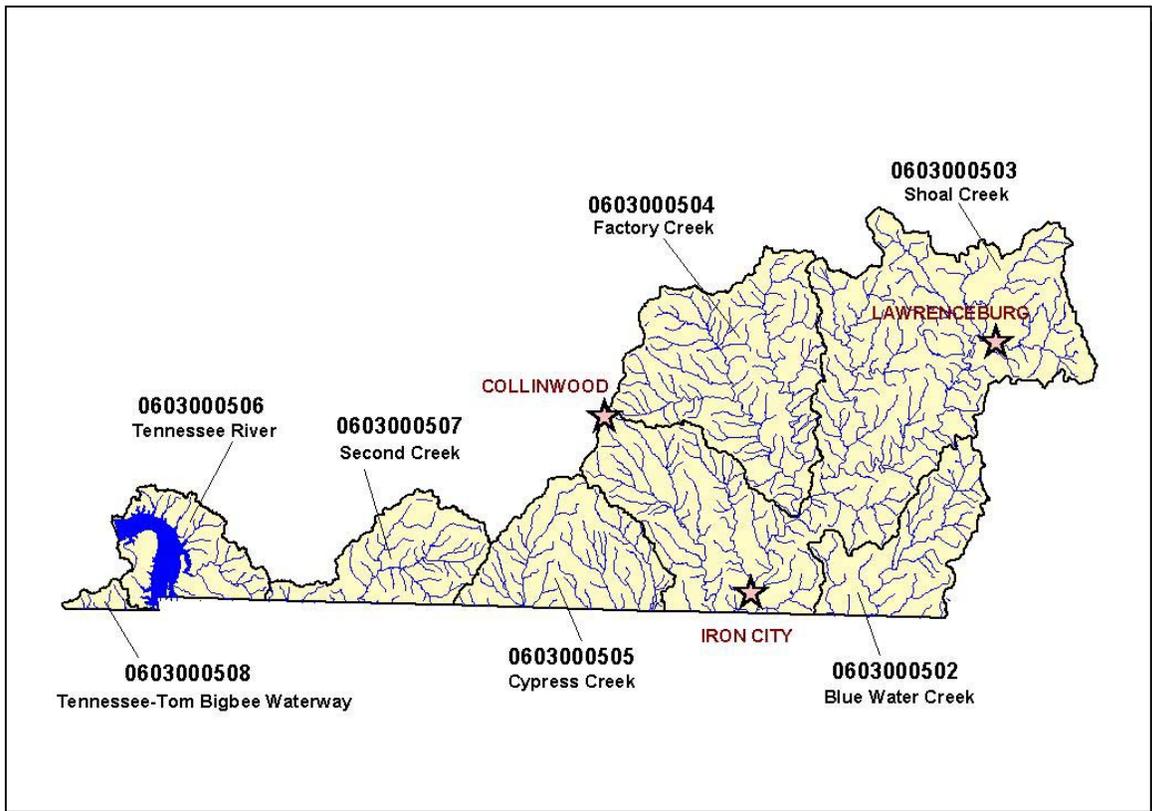


Figure 4-1. The Tennessee Portion of Pickwick Lake Watershed is Composed of Seven USGS-Delineated Subwatersheds (10-Digit Subwatersheds). Locations of Collinwood, Iron City, and Lawrenceburg are shown for reference.

4.2. CHARACTERIZATION OF HUC-10 SUBWATERSHEDS. The Watershed Characterization System (WCS) software and data sets provided by EPA Region IV were used to characterize each subwatershed in the Hiwassee River Watershed.

HUC-10	HUC-12
0603000502	060300050201 (Blue Water Creek)
0603000503	060300050301 (Little Shoal Creek)
	060300050302 (Dryland Creek)
	060300050303 (Upper Shoal Creek)
	060300050304 (Crowson Creek)
	060300050305 (Pond Creek)
	060300050306 (Middle Shoal Creek)
	060300050307 (Knob Creek)
	060300050308 (Holly Creek)
	060300050309 (Butler Creek)
0603000504	060300050401 (Factory Creek)
	060300050402 (Chisholm Creek)
0603000505	060300050501 (Cypress Creek)
	060300050502 (Middle Cypress Creek)
	060300050504 (Little Cypress Creek)
0603000506	060300050605 (Tennessee River Pickwick Dam)
0603000507	060300050701 (Second Creek)
	060300050702 (Bumpass Creek)
0603000508	060300050804 (TennTom)

Table 4-1. HUC-12 Drainage Areas are Nested Within HUC-10 Drainages. NRCS worked with USGS to delineate the HUC-10 and HUC-12 drainage boundaries.

4.2.A. 0603000502.

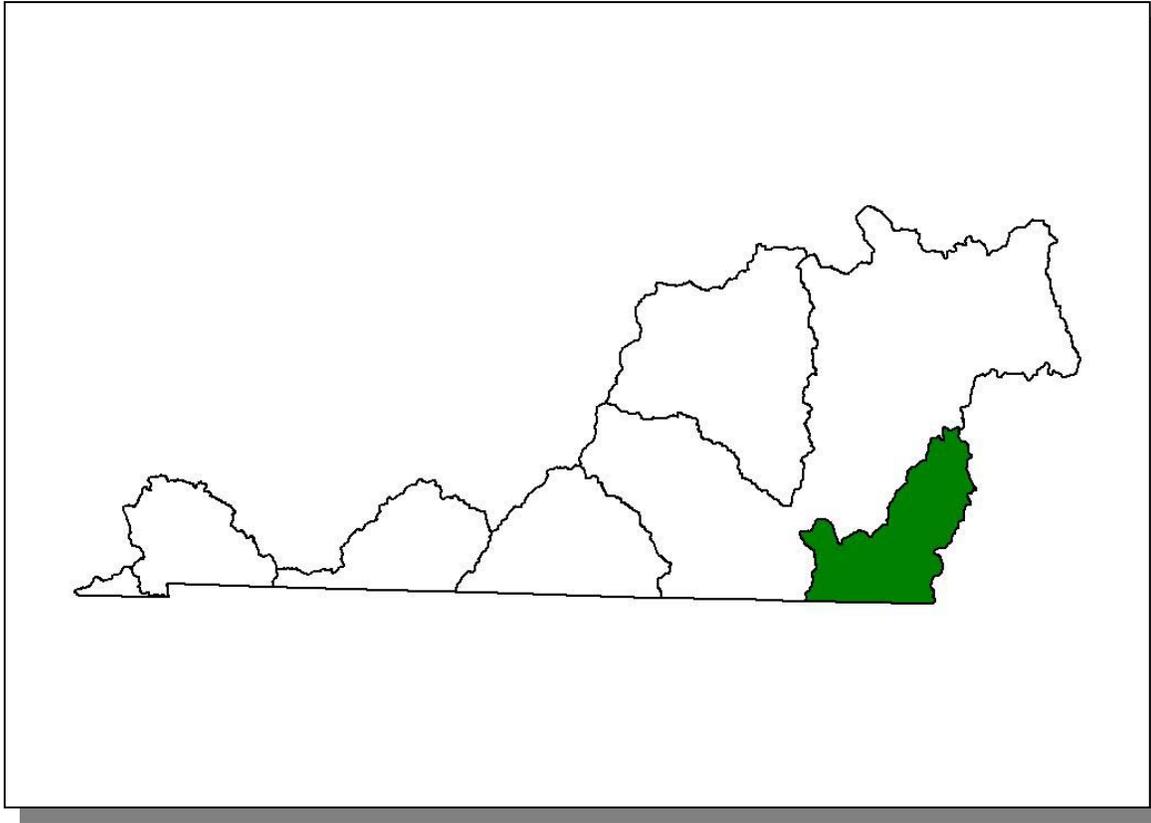


Figure 4-2. Location of Subwatershed 0603000502. All Pickwick HUC-10 subwatershed boundaries in Tennessee are shown for reference.

4.2.A.i. General Description.

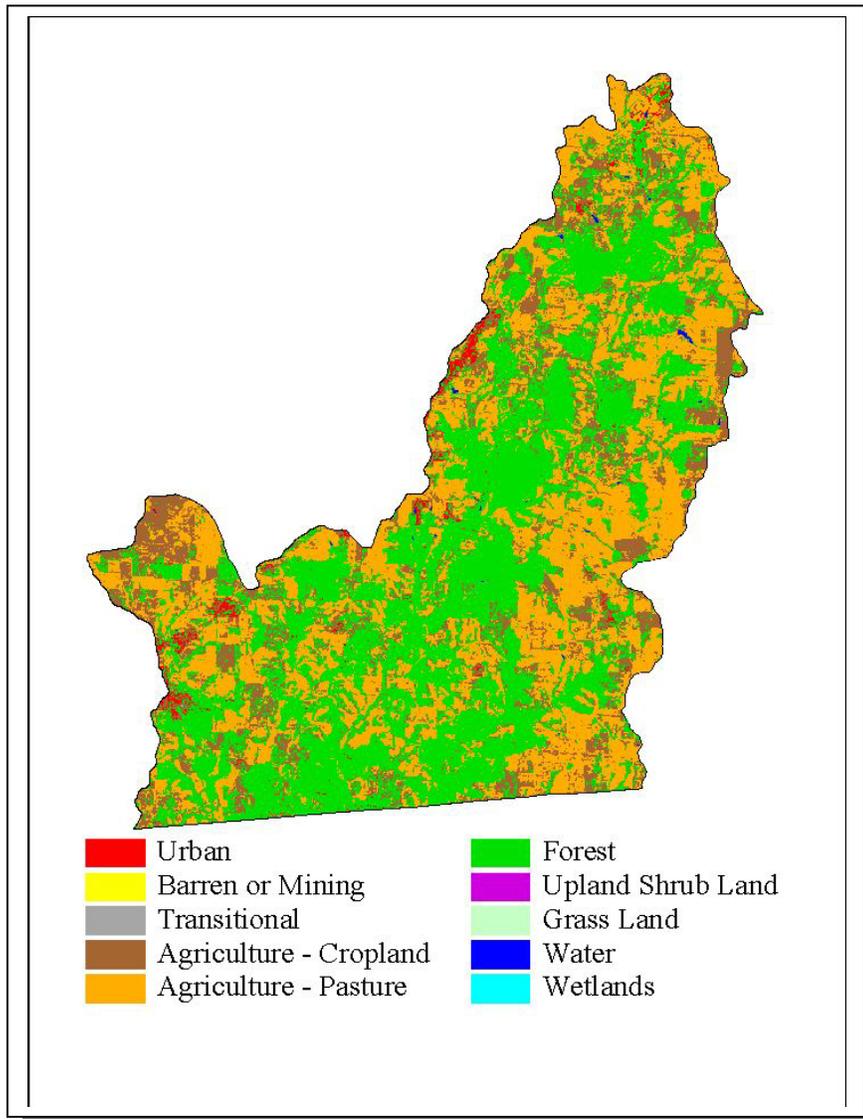


Figure 4-3. Illustration of Land Use Distribution in Subwatershed 0603000502.

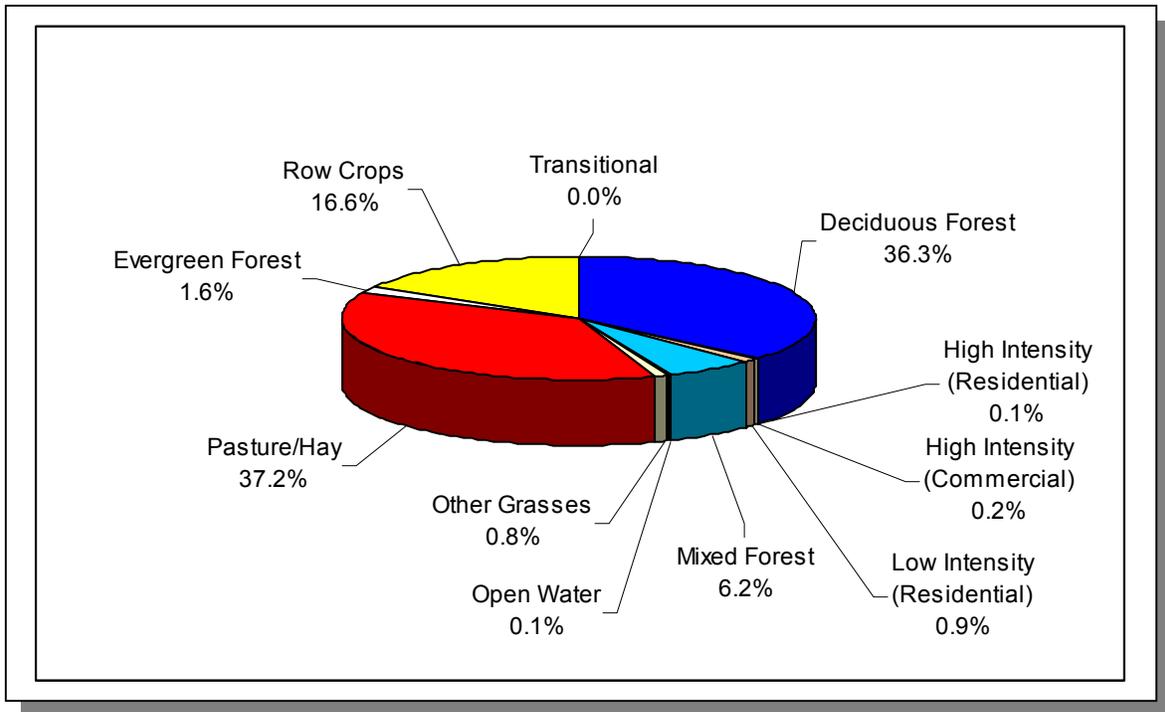


Figure 4-4. Land Use Distribution in Subwatershed 0603000502. More information is provided in Pickwick-Appendix IV.

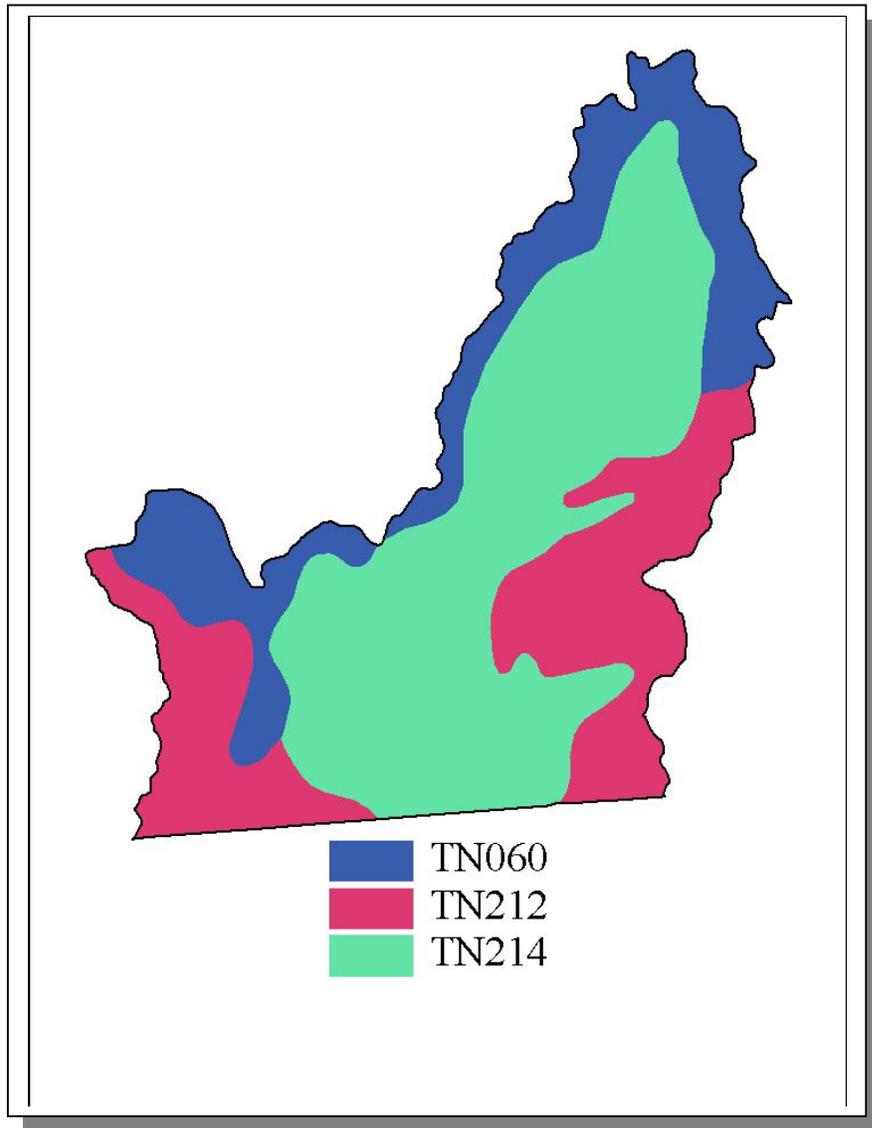


Figure 4-5. STATSGO (State Soil Geographic Database) Soil Map Units in Subwatershed 0603000502.

STATSGO MAP UNIT ID	PERCENT HYDRIC	HYDROLOGIC GROUP	PERMEABILITY (in/hour)	SOIL pH	ESTIMATED SOIL TEXTURE	SOIL ERODIBILITY
TN060	5.00	B	1.30	5.32	Silty Loam	0.39
TN212	4.00	B	1.95	5.04	Silty Loam	0.38
TN214	0.00	B	2.52	4.86	Loam	0.32

Table 4-2. Soil Characteristics by STATSGO (State Soil Geographic Database) Soil Map Units in Subwatershed 0603000502. More details are provided in Pickwick-Appendix IV.

County	COUNTY POPULATION		Portion of Watershed (%)	ESTIMATED POPULATION IN WATERSHED		PERCENT CHANGE
	1990	1997 Est.		1990	1997	
Lawrence	35,303	39,095	8.47	2,989	3,310	10.7

Table 4-3. Population Estimates in Subwatershed 0603000502.

Populated Place	County	Population	NUMBER OF HOUSING UNITS			
			Total	Public Sewer	Septic Tank	Other
Loretto	Lawrence	1,515	620	20	594	6
St. Joseph	Lawrence	806	336	14	315	7
Total		2,321	956	34	909	13

Table 4-4. Housing and Sewage Disposal Practices of Select Communities in Subwatershed 0603000502.



Figure 4-6. Location of Historical Streamflow Data Collection Sites in Subwatershed 0603000502. More information is provided in Pickwick-Appendix IV.

4.2.A.ii. Point Source Contributions.

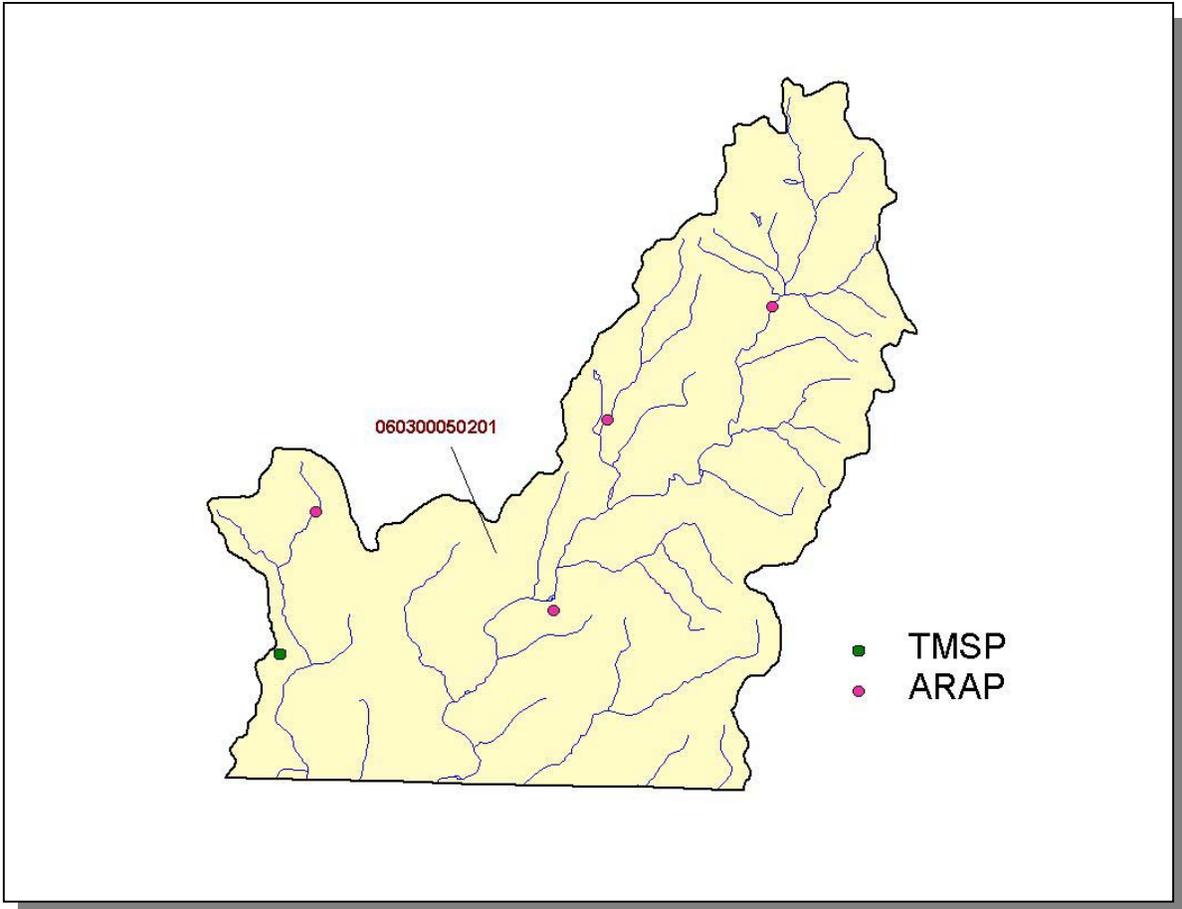


Figure 4-7. Location of Active Point Source Facilities in Subwatershed 0603000502. More information is provided in the following figures.



Figure 4-8. Location of TMSF Facilities in Subwatershed 0603000502. More information, including the names of facilities, is provided in Pickwick-Appendix IV.

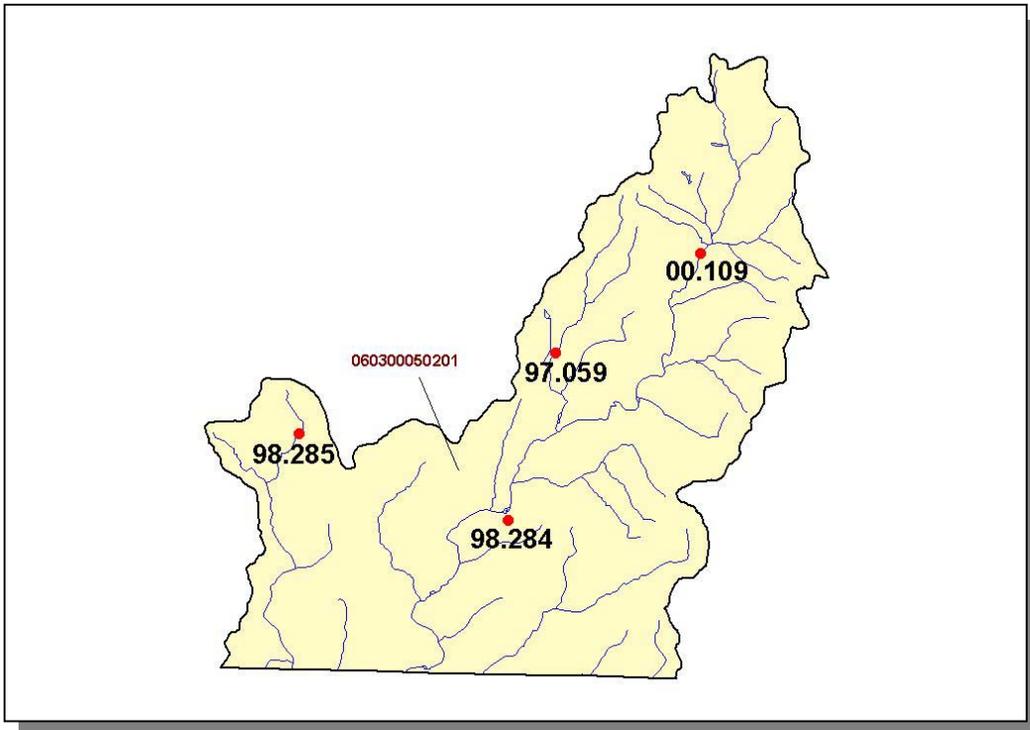


Figure 4-9. Location of ARAP Sites (Individual Permits) in Subwatershed 0603000502. More information, including the names of facilities, is provided in Pickwick-Appendix IV.

4.2.A.iii. Nonpoint Source Contributions.

LIVESTOCK (COUNTS)						
Beef Cow	Cattle	Milk Cow	Chickens	Chickens Sold	Hogs	Sheep
3,261	6,359	363	10	16,014	976	26

Table 4-5. Summary of Livestock Count Estimates in Subwatershed 0603000502. According to the 1997 Census of Agriculture (<http://www.nass.usda.gov/census/>), "Cattle" includes heifers, heifer calves, steers, bulls and bull calves; "Chickens" are layers 20 weeks and older; "Chickens Sold" are all chickens used to produce meat.

County	INVENTORY		REMOVAL RATE	
	Forest Land (thousand acres)	Timber Land (thousand acres)	Growing Stock (million cubic feet)	Sawtimber (million board feet)
Lawrence	199.8	199.8	6.6	27.1

Table 4-6. Forest Acreage and Annual Removal Rates (1987-1994) in Subwatershed 0603000502.

CROPS	TONS/ACRE/YEAR
Corn (Row Crops)	5.41
Soybeans (Row Crops)	28.85
Cotton (Row Crops)	8.07
Grass (Hayland)	0.19
Legume/Grass (Hayland)	0.64
Grass (Pastureland)	0.24
Grass, Forbs, Legumes (Mixed Pasture)	0.11
Forest Land (Grazed)	0.00
Forest Land (Not Grazed)	0.00
Conservation Reserve Program Land	0.90
Wheat (Close Grown Cropland)	14.15
All Other Close Grown Cropland	1.80
Nonagricultural Land Use	0.00
Farmsteads and Ranch Headquarters	6.47
Other Cropland (Not Planted)	13.55

Table 4-7. Annual Estimated Total Soil Loss in Subwatershed 0603000502.

4.2.B. 0603000503.

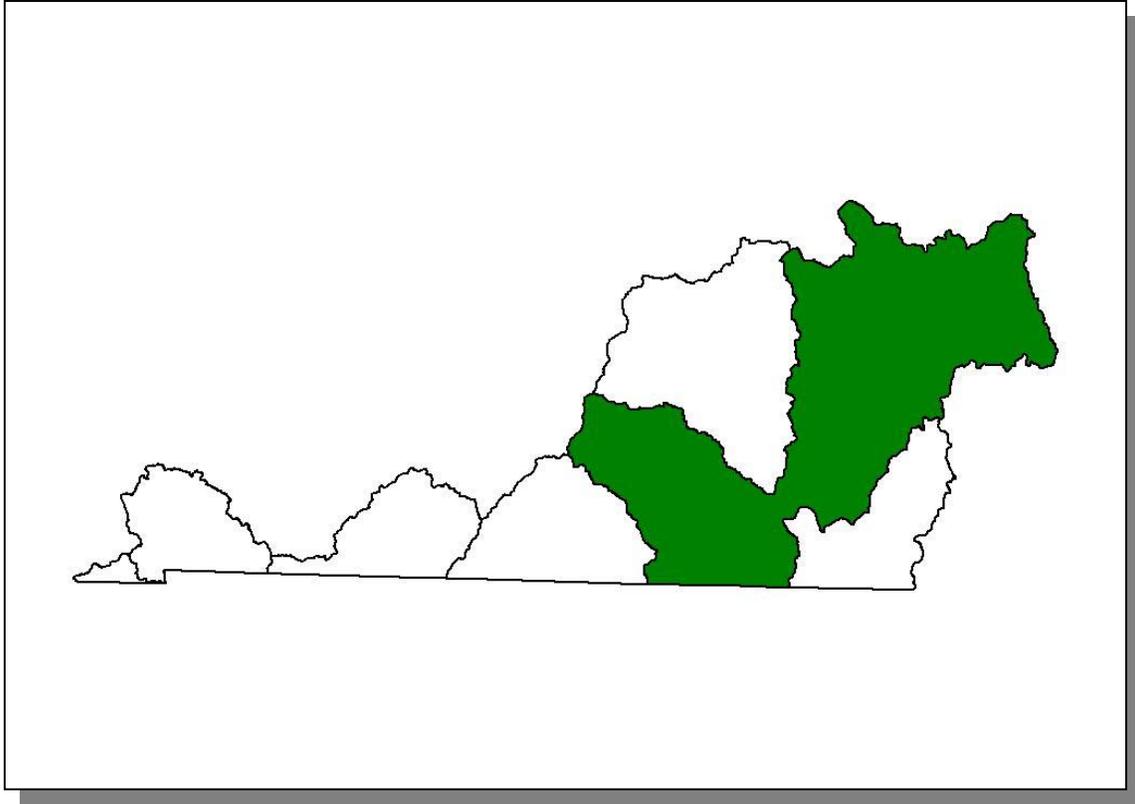


Figure 4-10. Location of Subwatershed 0603000503. All Pickwick HUC-10 subwatershed boundaries in Tennessee are shown for reference.

4.2.B.i. General Description.

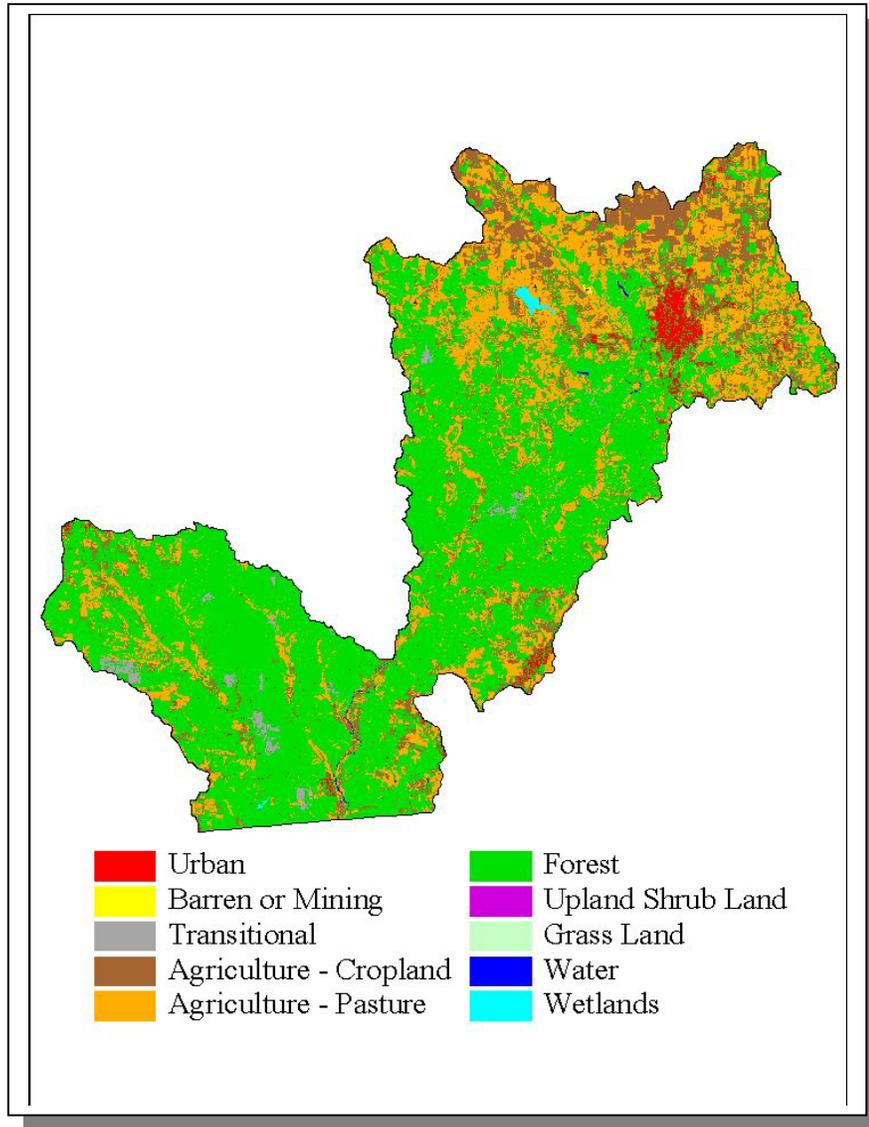


Figure 4-11. Illustration of Land Use Distribution in Subwatershed 0603000503.

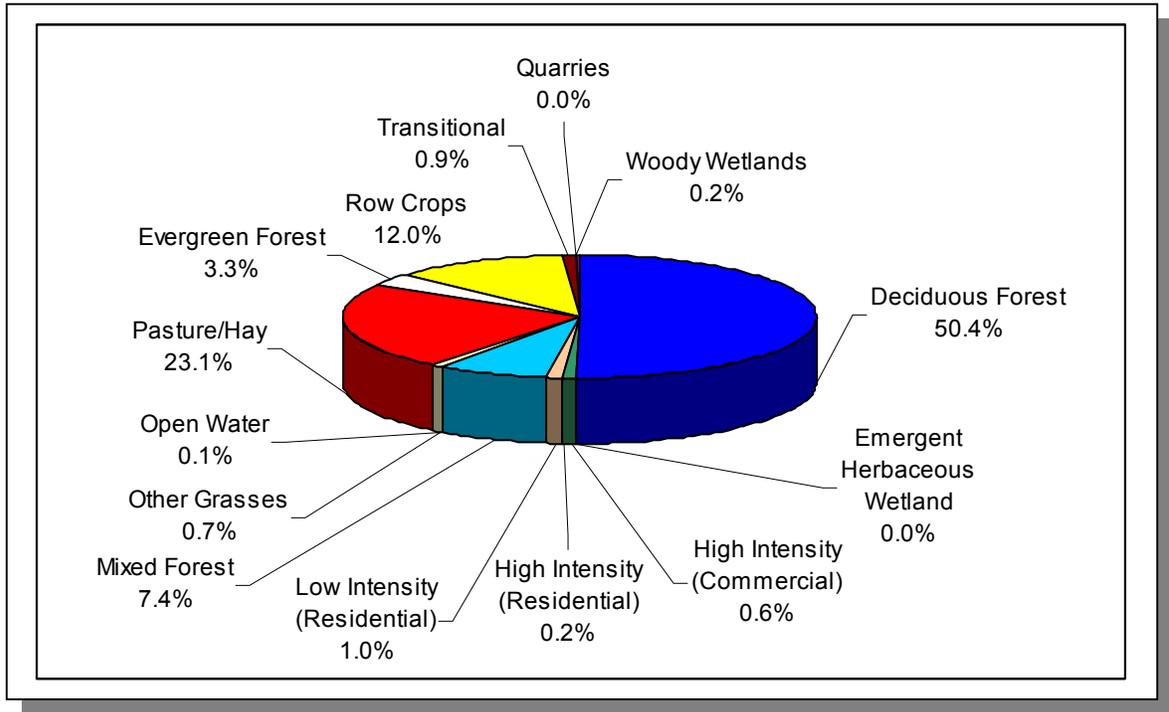


Figure 4-12. Land Use Distribution in Subwatershed 0603000503. More information is provided in Pickwick-Appendix IV.

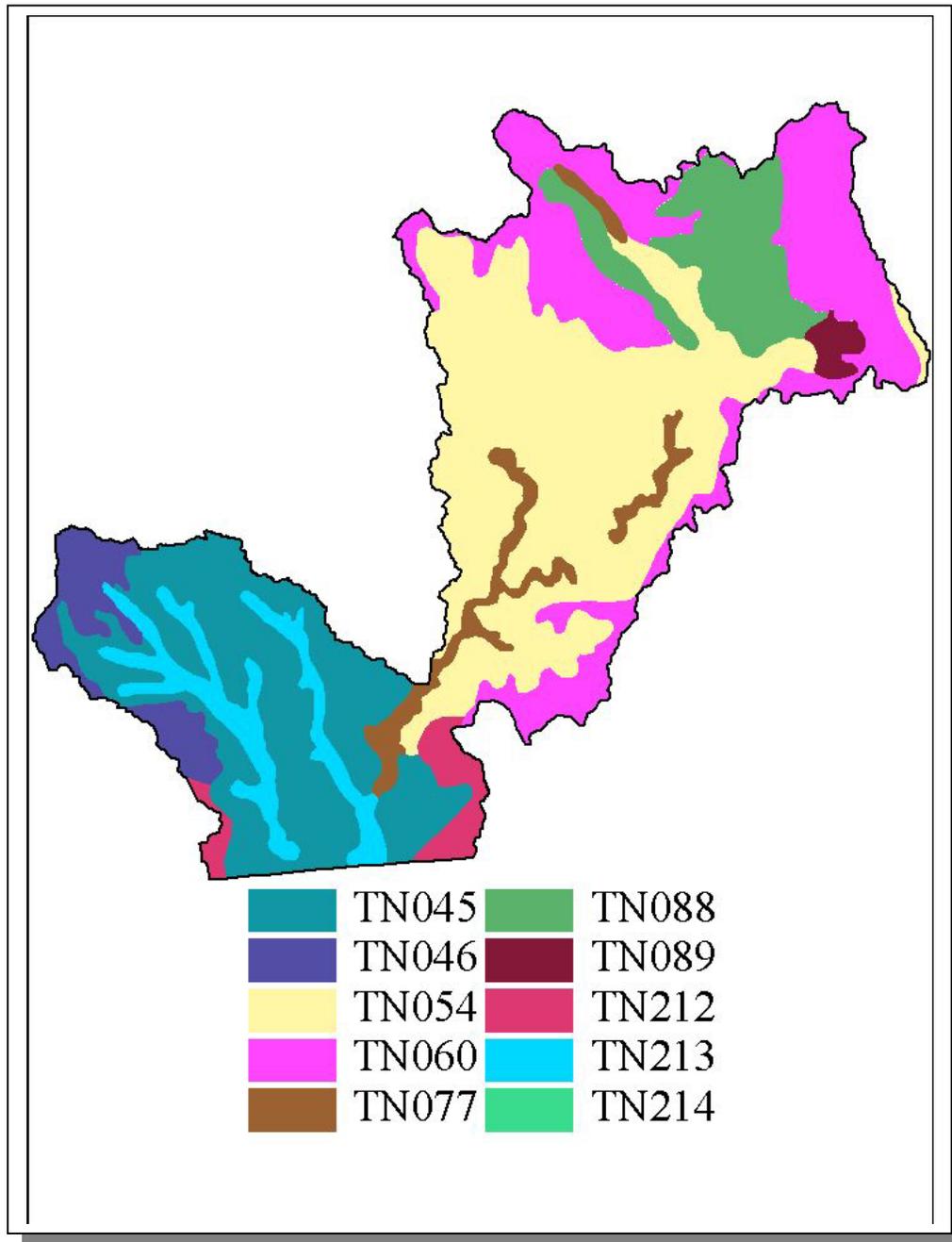


Figure 4-13. STATSGO (State Soil Geographic Database) Soil Map Units in Subwatershed 0603000503.

STATSGO MAP UNIT ID	PERCENT HYDRIC	HYDROLOGIC GROUP	PERMEABILITY (in/hour)	SOIL pH	ESTIMATED SOIL TEXTURE	SOIL ERODIBILITY
TN045	0.00	B	1.95	5.45	Loam	0.35
TN046	0.00	B	1.98	5.09	Silty Loam	0.38
TN054	0.00	C	3.04	4.84	Loam	0.32
TN060	5.00	B	1.30	5.32	Silty Loam	0.39
TN077	4.00	C	2.16	5.03	Loam	0.34
TN088	1.00	B	1.38	5.43	Silty Loam	0.34
TN089	3.00	B	1.46	5.36	Loam	0.35
TN212	4.00	B	1.95	5.04	Silty Loam	0.38
TN213	9.00	C	1.89	5.30	Loam	0.35
TN214	0.00	B	2.52	4.86	Loam	0.32

Table 4-8. Soil Characteristics by STATSGO (State Soil Geographic Database) Soil Map Units in Subwatershed 0603000503. More information is provided in Pickwick-Appendix IV.

County	COUNTY POPULATION		Portion of Watershed (%)	ESTIMATED POPULATION IN WATERSHED		% CHANGE
	1990	1997 Est.		1990	1997	
Lawrence	35,303	39,095	35.79	12,636	13,994	10.7
Wayne	13,935	16,498	9.27	1,292	1,529	18.3
Total	49,238	55,593		13,928	15,523	11.5

Table 4-9. Population Estimates in Subwatershed 0603000503.

Populated Place	County	Population	NUMBER OF HOUSING UNITS			
			Total	Public Sewer	Septic Tank	Other
Collinwood	Wayne	1,014	440	31	407	2
Iron City	Lawrence	385	156	0	156	0
Ethridge	Lawrence	571	250	11	234	5
Lawrenceburg	Lawrence	10,412	4,711	4,134	564	13
Loretto	Lawrence	1,515	620	20	594	6
St. Joseph	Lawrence	806	336	14	315	7
Totals		14,703	6,513	4,210	2,270	33

Table 4-10. Housing and Sewage Disposal Practices of Select Communities in Subwatershed 0603000503.

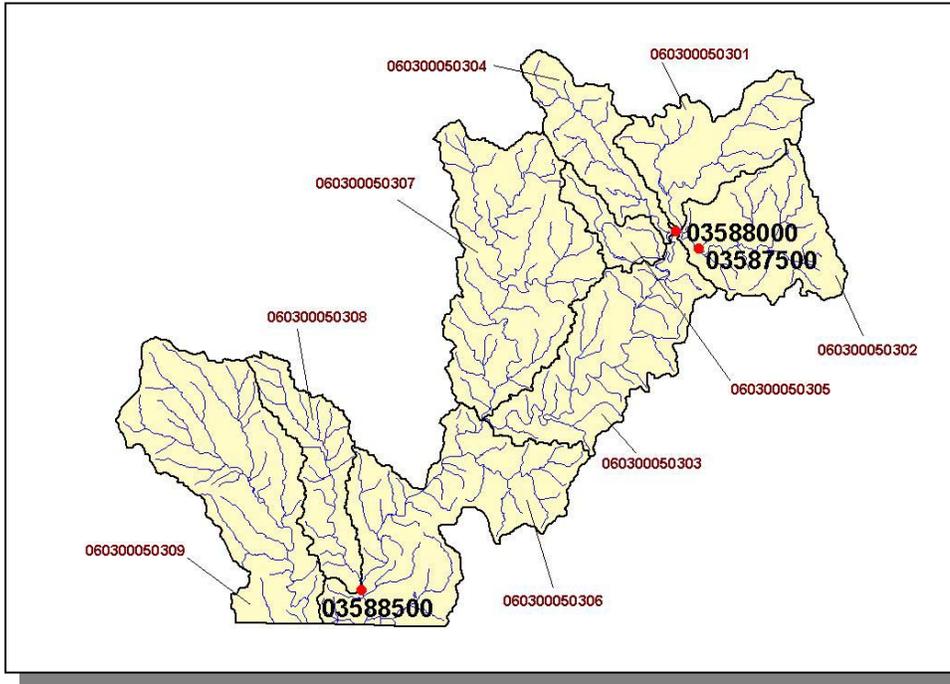


Figure 4-14. Location of Historical Streamflow Data Collection Sites in Subwatershed 0603000503. Subwatershed 060300050301, 060300050302, 060300050303, 060300050304, 060300050305, 060300050306, 060300050307, 060300050308, and 060300050309 boundaries are shown for reference. More information is provided in Pickwick-Appendix IV.

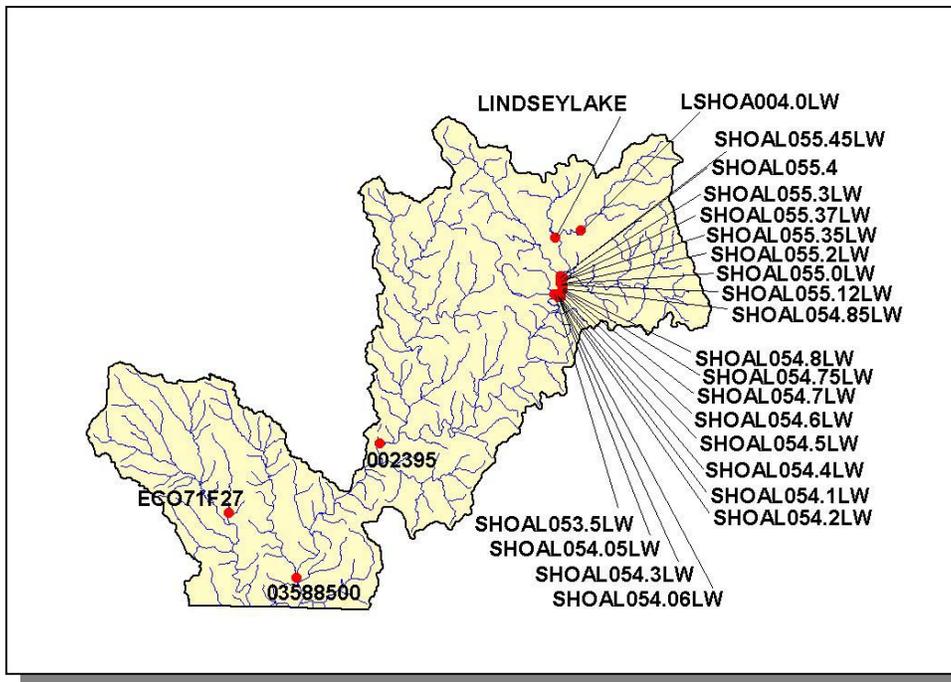


Figure 4-15. Location of STORET Monitoring Sites in Subwatershed 0603000503. Subwatershed 060300050301, 060300050302, 060300050303, 060300050304, 060300050305, 060300050306, 060300050307, 060300050308, and 060300050309 boundaries are shown for reference. More information is provided in Pickwick-Appendix IV.

4.2.B.ii. Point Source Contributions.

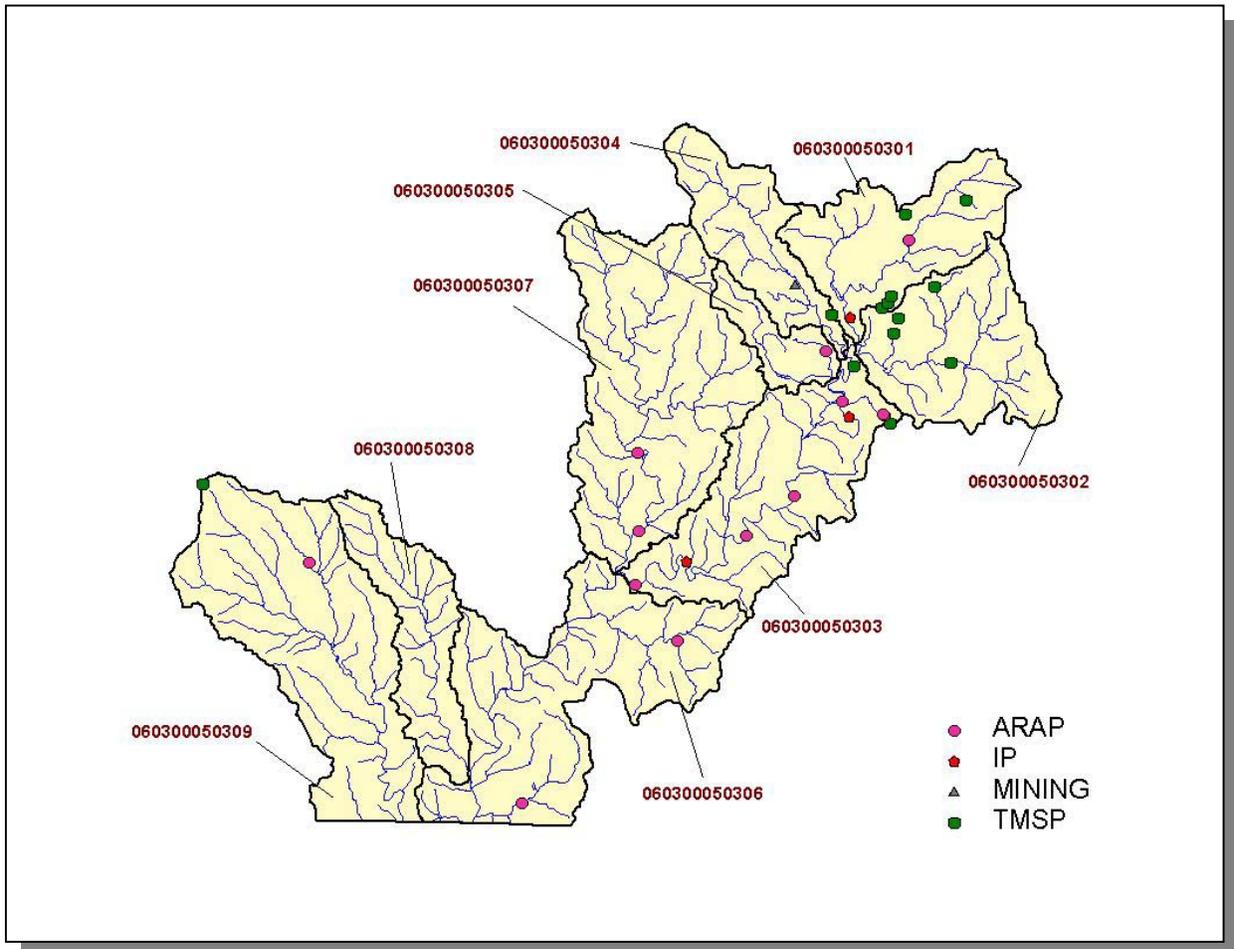


Figure 4-16. Location of Active Point Source Facilities in Subwatershed 0603000503. Subwatershed 060300050301, 060300050302, 060300050303, 060300050304, 060300050305, 060300050306, 060300050307, 060300050308, and 060300050309 boundaries are shown for reference. More information is provided in the following figures.

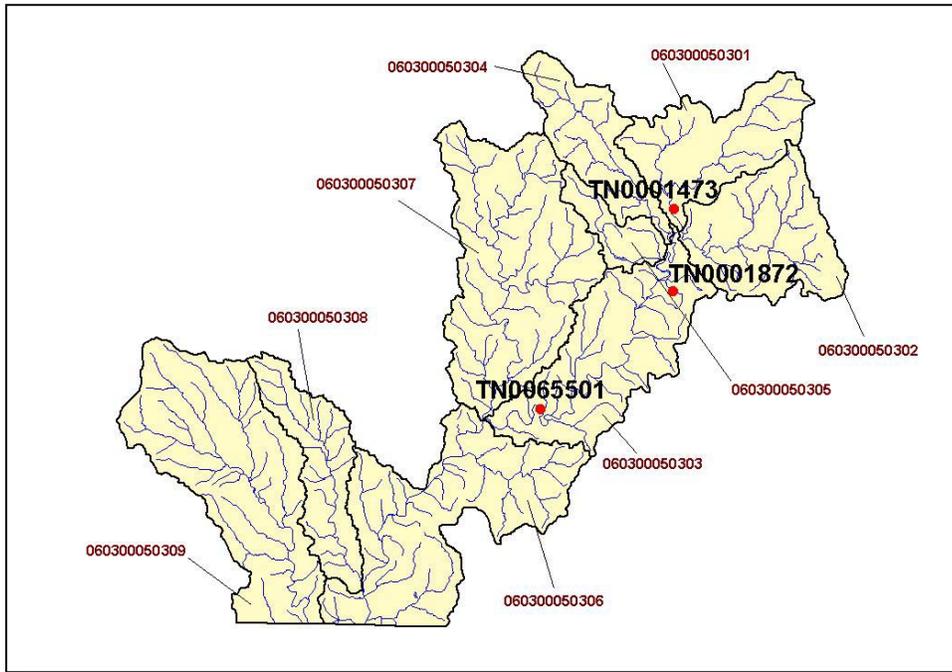


Figure 4-17. Location of Active Point Source Facilities (Individual Permits) in Subwatershed 0603000503. Subwatershed 060300050301, 060300050302, 060300050303, 060300050304, 060300050305, 060300050306, 060300050307, 060300050308, and 060300050309 boundaries are shown for reference. More information, including the names of facilities, is provided in Pickwick-Appendix IV.

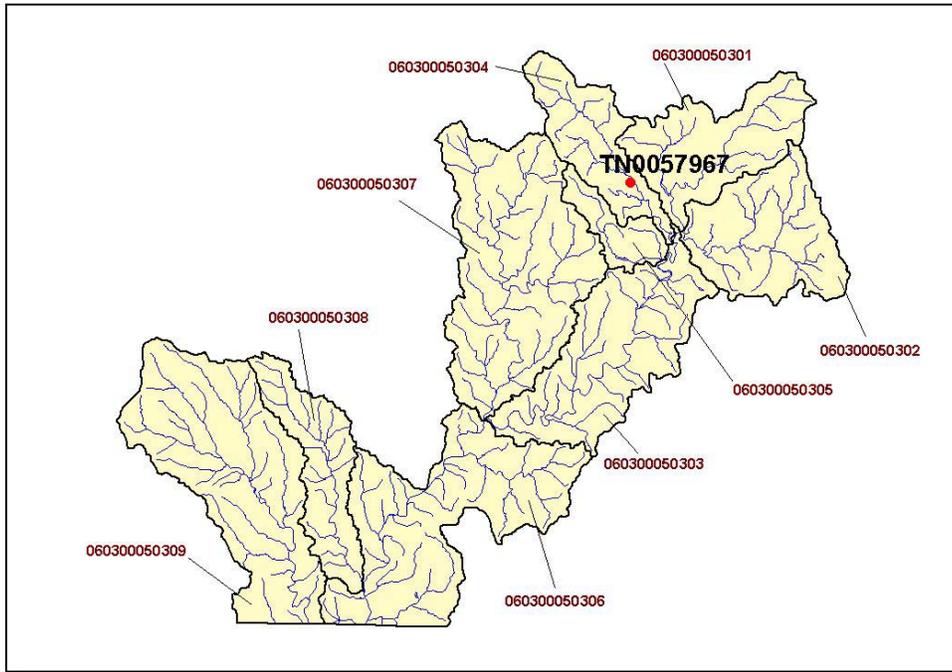


Figure 4-18. Location of Active Mining Sites in Subwatershed 0603000503. Subwatershed 060300050301, 060300050302, 060300050303, 060300050304, 060300050305, 060300050306, 060300050307, 060300050308, and 060300050309 boundaries are shown for reference. More information, including the names of facilities, is provided in Pickwick-Appendix IV.

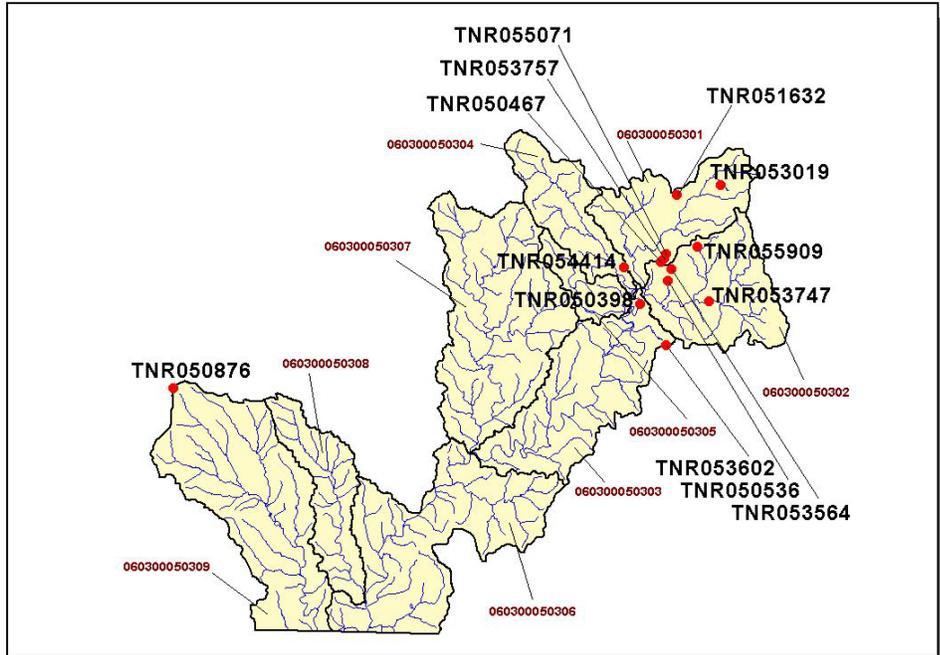


Figure 4-19. Location of TMSF Facilities in Subwatershed 0603000503. Subwatershed 060300050301, 060300050302, 060300050303, 060300050304, 060300050305, 060300050306, 060300050307, 060300050308, and 060300050309 boundaries are shown for reference. More information, including the names of facilities, is provided in Pickwick-Appendix IV.

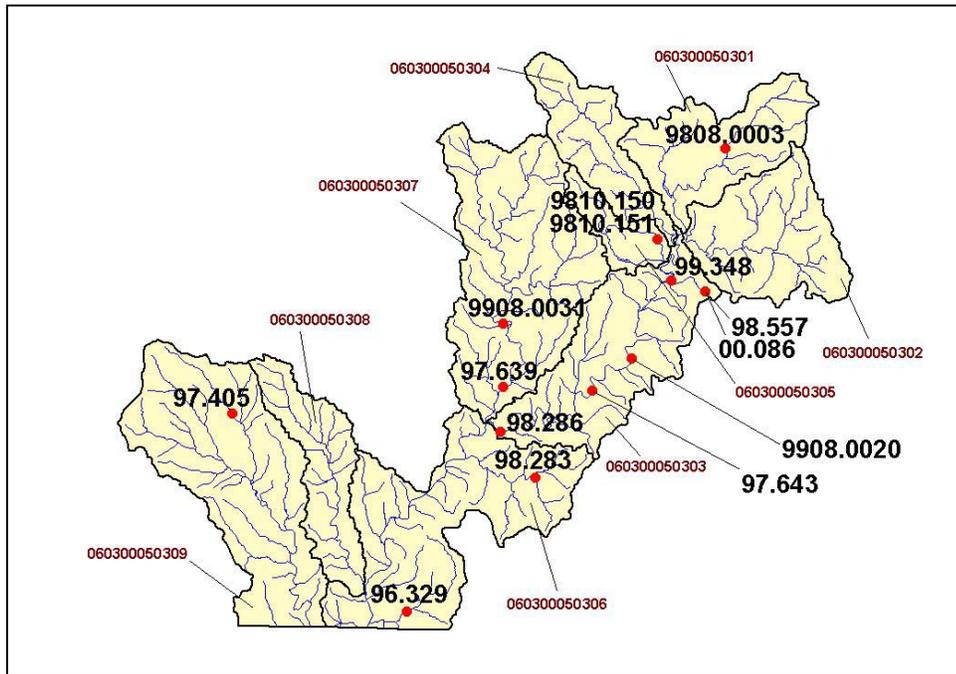


Figure 4-20. Location of ARAP Sites (Individual Permits) in Subwatershed 0603000503. Subwatershed 060300050301, 060300050302, 060300050303, 060300050304, 060300050305, 060300050306, 060300050307, 060300050308, and 060300050309 boundaries are shown for reference. More information, including the names of facilities, is provided in Pickwick-Appendix IV.

4.2.B.iii. Nonpoint Source Contributions.

LIVESTOCK (COUNTS)						
Beef Cow	Cattle	Milk Cow	Chickens	Chickens Sold	Hogs	Sheep
11,836	22,830	1,153	33	5,979	3,407	91

Table 4-11. Summary of Livestock Count Estimates in Subwatershed 0603000503. According to the 1997 Census of Agriculture (<http://www.nass.usda.gov/census/>), "Cattle" includes heifers, heifer calves, steers, bulls and bull calves; "Chickens" are layers 20 weeks and older; "Chickens Sold" are all chickens used to produce meat.

County	INVENTORY		REMOVAL RATE	
	Forest Land (thousand acres)	Timber Land (thousand acres)	Growing Stock (million cubic feet)	Sawtimber (million board feet)
Wayne	199.8	199.8	6.6	27.1
Lawrence	372.6	372.6	14.1	41.1
Total	572.4	572.4	20.7	68.2

Table 4-12. Forest Acreage and Average Annual Removal Rates (1987-1994) in Subwatershed 0603000503.

CROPS	TONS/ACRE/YEAR
Legume/Grass (Hayland)	0.64
Grass (Hayland)	0.19
Forest Land (Grazed)	0.00
Forest Land (Not Grazed)	0.00
Corn (Row Crops)	6.01
Soybeans (Row Crops)	28.85
Cotton (Row Crops)	8.07
Wheat (Close Grown Cropland)	14.15
All Other Close Grown Cropland	1.80
Grass (Pastureland)	0.23
Grass, Forbs, Legumes (Mixed Pasture)	0.25
Other Vegetable and Truck Crop	
Other (Horticulture)	
Other Cropland not Planted	13.55
Conservation Reserve Program Land	0.90
Non Agricultural Land Use	0.00
Farmsteads and Ranch Headquarters	5.16

Table 4-13. Annual Estimated Total Soil Loss in Subwatershed 0603000503.

4.2.C. 0603000504.

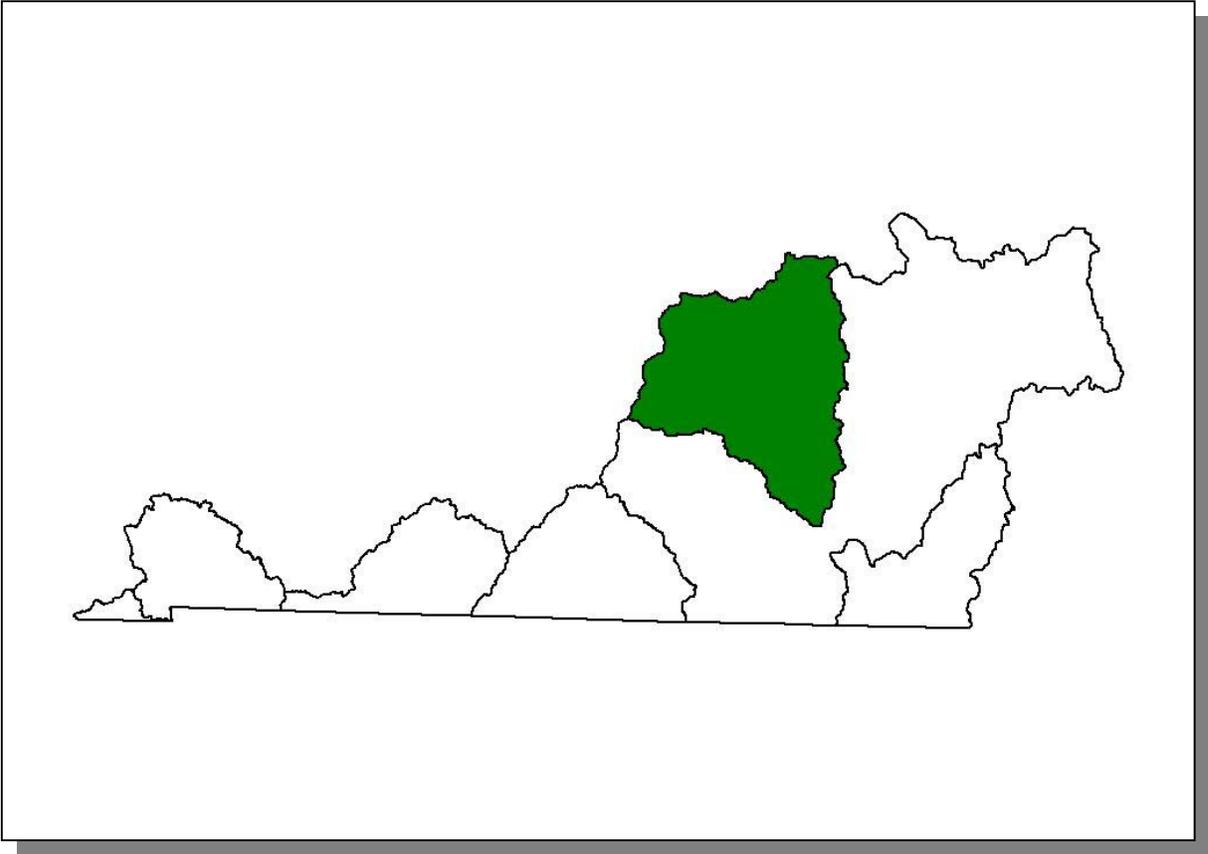


Figure 4-21. Location of Subwatershed 0603000504. All Pickwick HUC-10 subwatershed boundaries in Tennessee are shown for reference.

4.2.C.i. General Description.

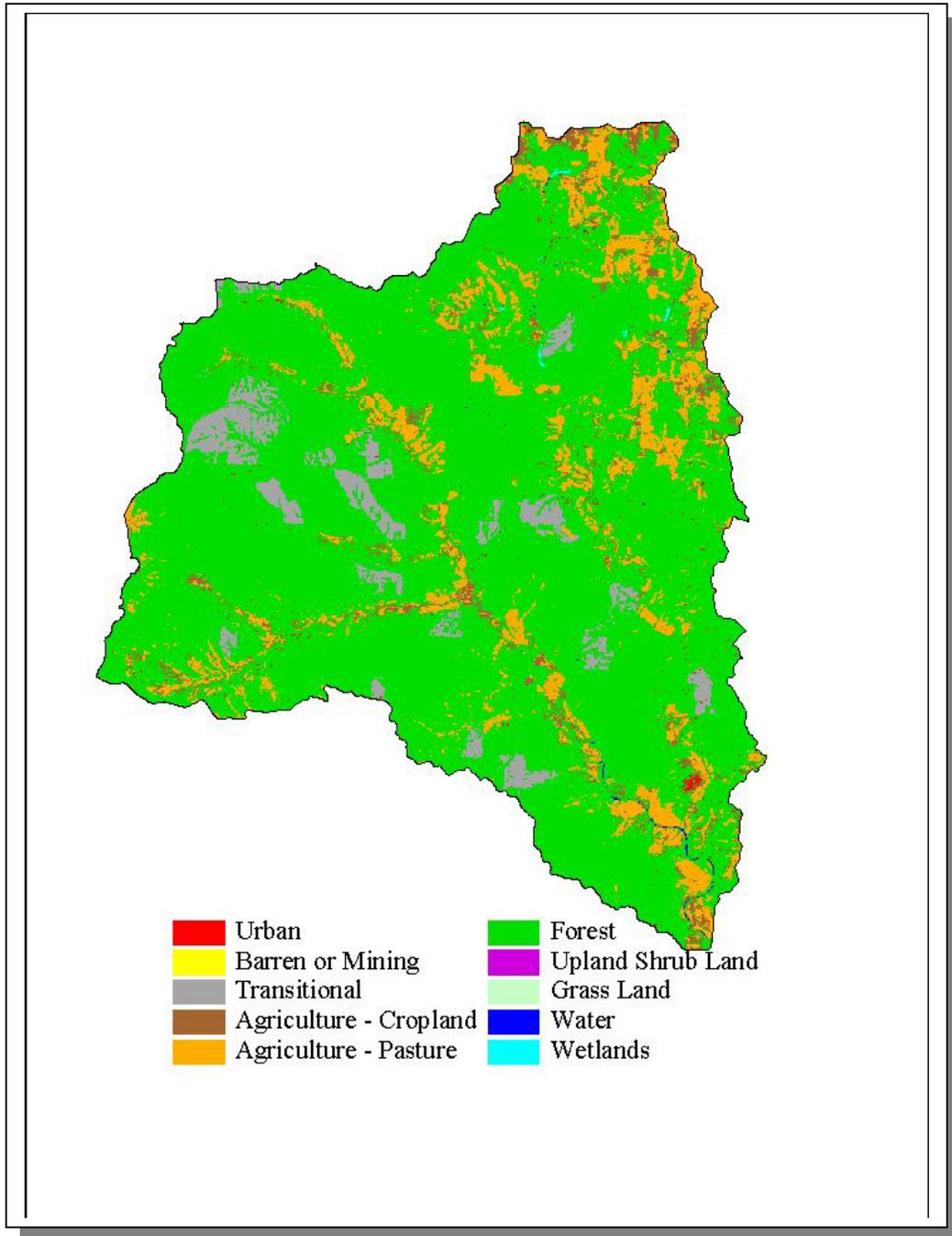


Figure 4-22. Illustration of Land Use Distribution in Subwatershed 0603000504.

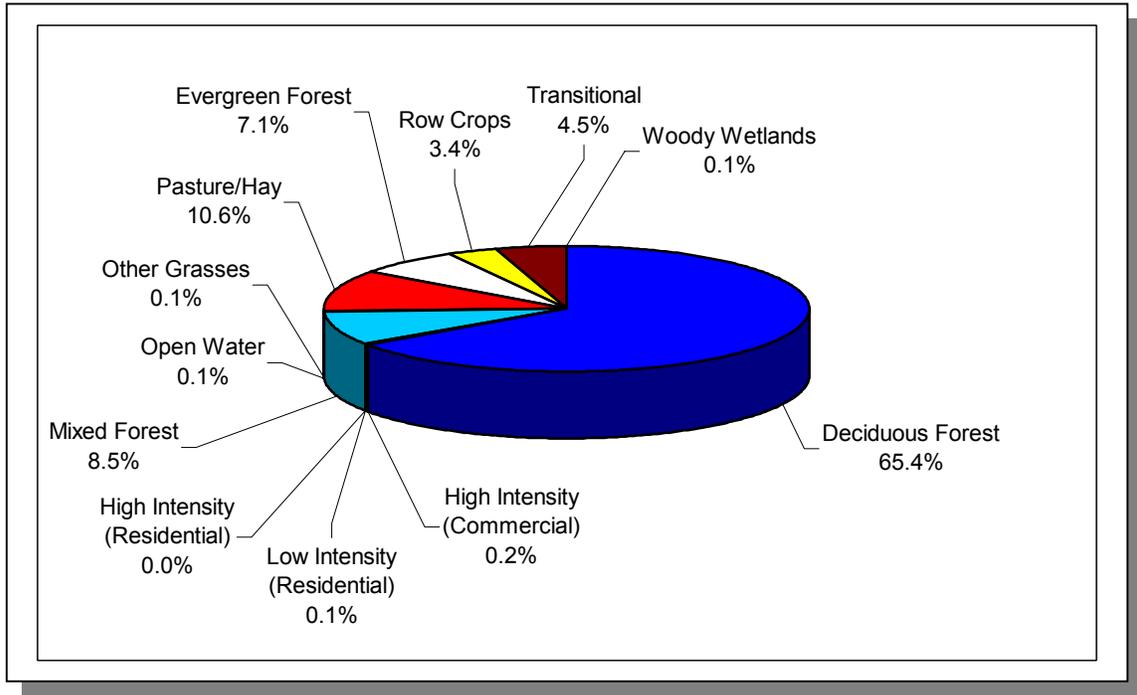


Figure 4-23. Land Use Distribution in Subwatershed 0603000504. More information is provided in Pickwick-Appendix IV.

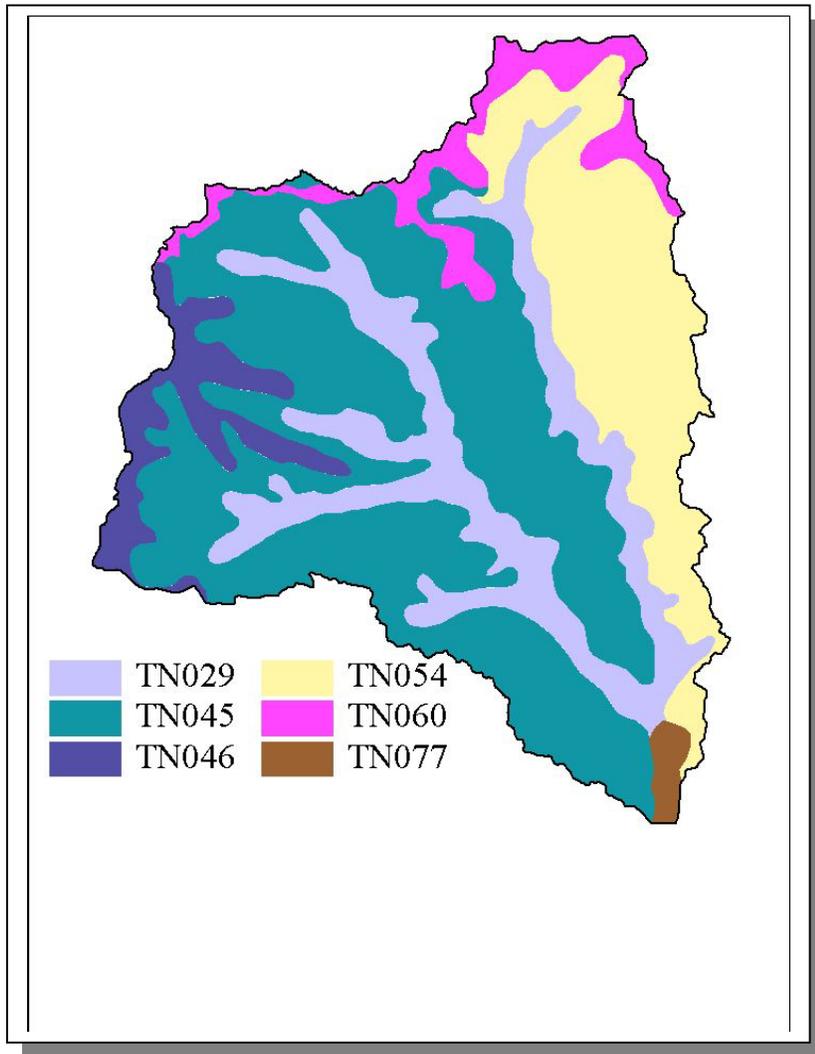


Figure 4-24. STATSGO (State Soil Geographic Database) Soil Map Units in Subwatershed 0603000504.

STATSGO MAP UNIT ID	PERCENT HYDRIC	HYDROLOGIC GROUP	PERMEABILITY (in/hour)	SOIL pH	ESTIMATED SOIL TEXTURE	SOIL ERODIBILITY
TN029	8.00	C	2.96	5.40	Loam	0.33
TN045	0.00	B	1.95	5.45	Loam	0.35
TN046	0.00	B	1.98	5.09	Silty Loam	0.38
TN054	0.00	C	3.04	4.84	Loam	0.32
TN060	5.00	B	1.30	5.32	Silty Loam	0.39
TN077	4.00	C	2.16	5.03	Loam	0.34

Table 4-14. Soil Characteristics by STATSGO (State Soil Geographic Database) Soil Map Units in Subwatershed 0603000504. More information is provided in Pickwick-Appendix IV.

County	COUNTY POPULATION		Portion of Watershed (%)	ESTIMATED POPULATION IN WATERSHED		PERCENT CHANGE
	1990	1997 Est.		1990	1997	
Lawrence	35,303	39,095	8.65	3,052	3,380	10.7
Wayne	13,935	16,498	8.91	1,241	1,469	18.4
Total	49,238	55,593		4,293	4,849	13.0

Table 4-15. Population Estimates in Subwatershed 0603000504.

Populated Place	County	Population	NUMBER OF HOUSING UNITS			
			Total	Public Sewer	Septic Tank	Other
Collinwood	Wayne	1,104	440	31	407	2

Table 4-16. Housing and Sewage Disposal Practices of Select Communities in Subwatershed 0603000504.

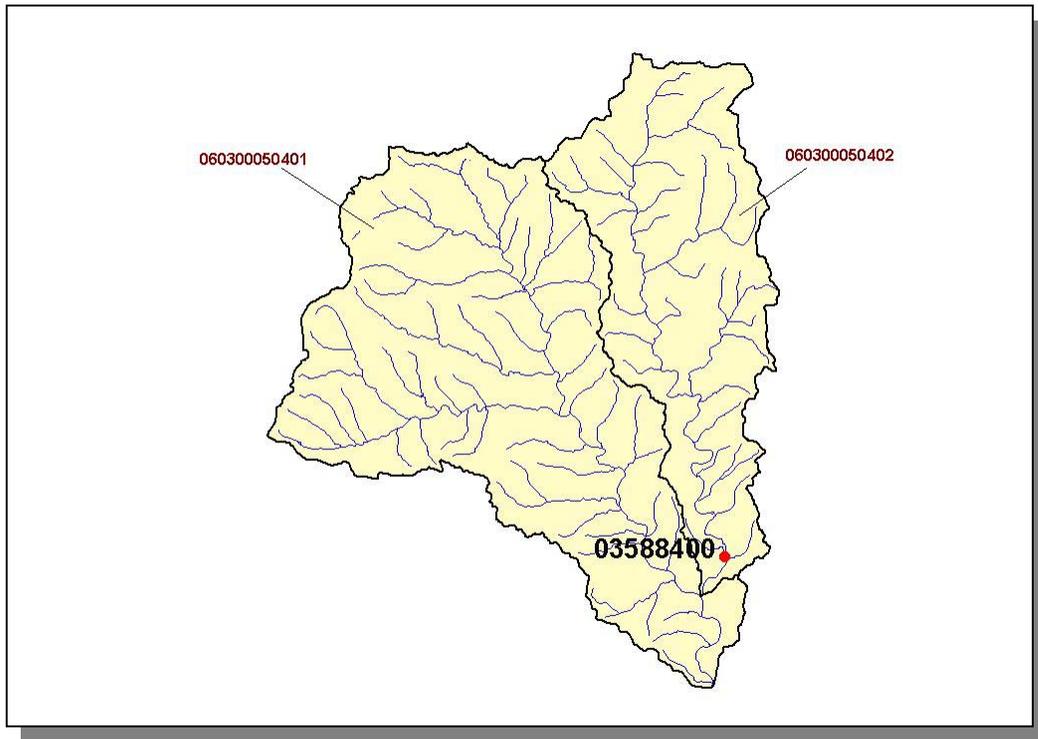


Figure 4-25. Location of Historical Streamflow Data Collection Sites in Subwatershed 0603000504. Subwatershed 060300050401 and 060300050402 boundaries are shown for reference. More information is provided in Pickwick-Appendix IV.

4.2.C.ii. Point Source Contributions.

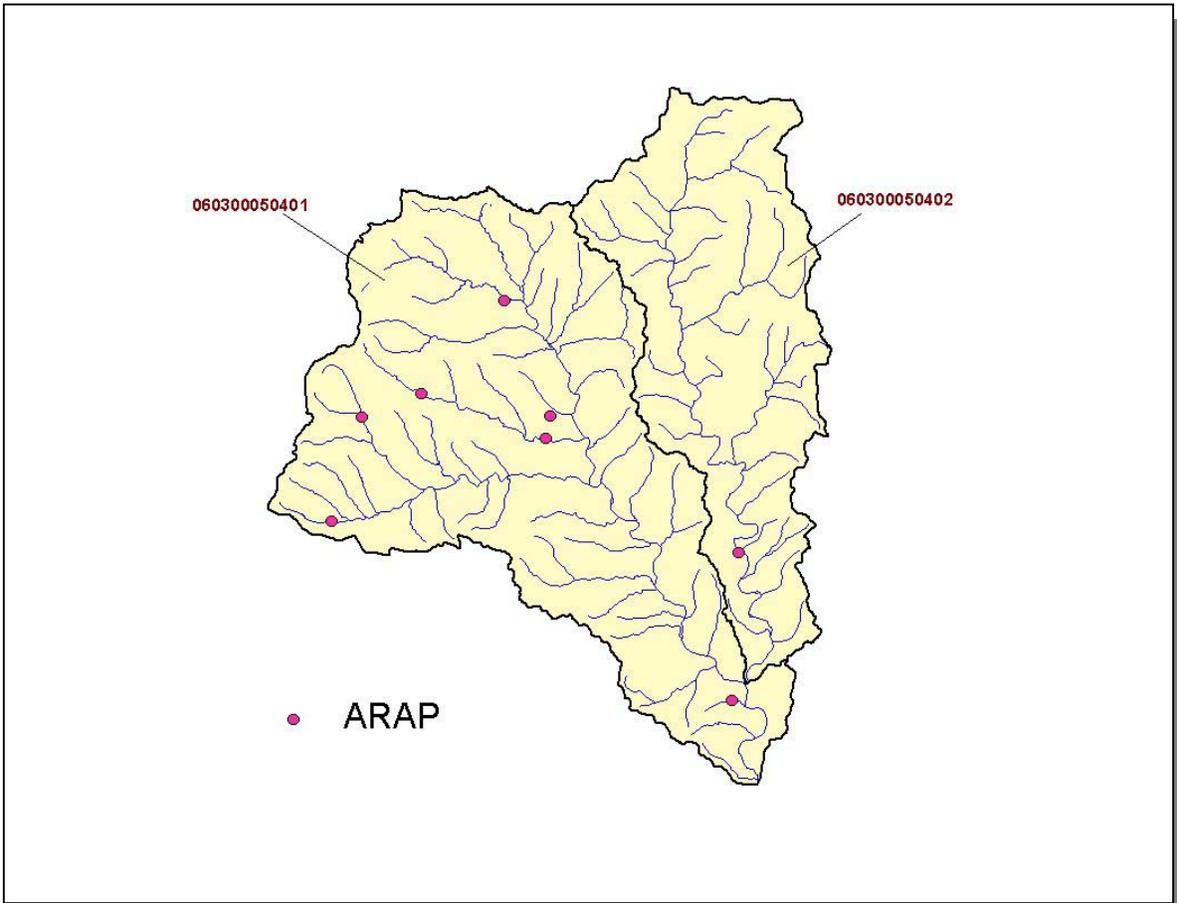


Figure 4-26. Location of Active Point Source Facilities in Subwatershed 0603000504. Subwatershed 060300050401 and 060300050402 boundaries are shown for reference. More information is provided in the following figures.

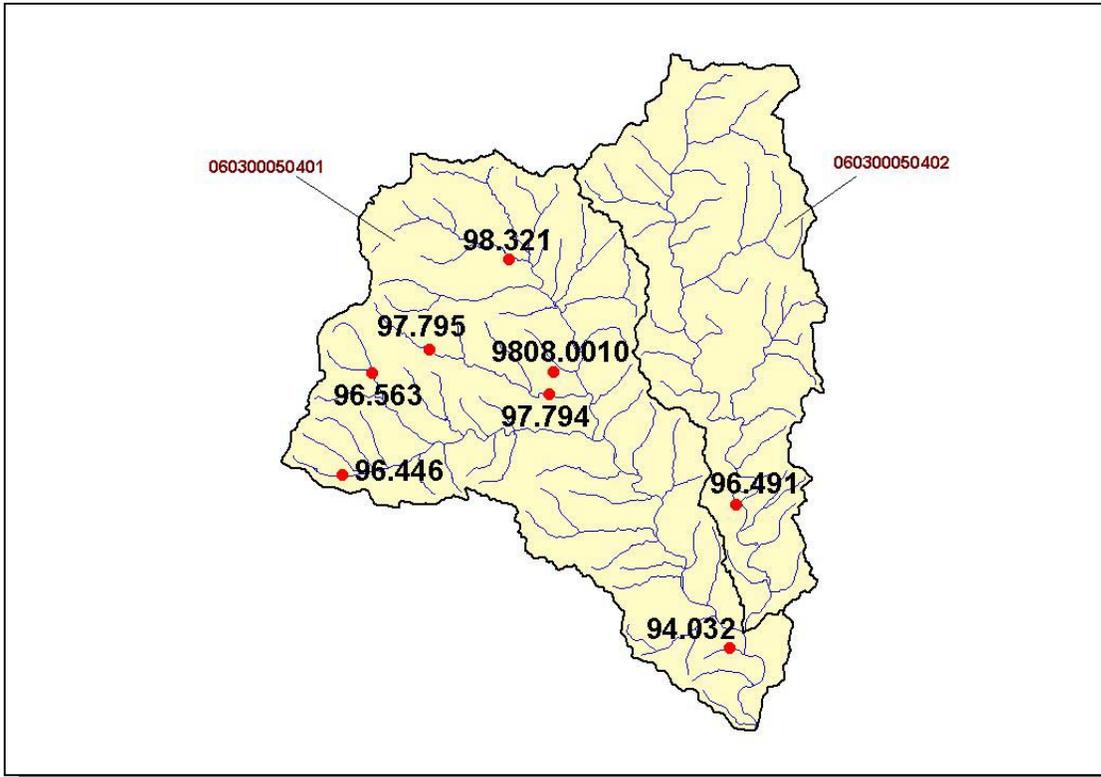


Figure 4-27. Location of ARAP Sites (Individual Permits) in Subwatershed 0603000504. Subwatershed 060300050401 and 060300050402 boundaries are shown for reference. More information, including the names of facilities, is provided in Pickwick-Appendix IV.

4.2.C.iii. Nonpoint Source Contributions.

LIVESTOCK (COUNTS)						
Beef Cow	Cattle	Milk Cow	Chickens	Chickens Sold	Hogs	Sheep
2,082	3,921	137	5	3	529	17

Table 4-17. Summary of Livestock Count Estimates in Subwatershed 0603000504. According to the 1997 Census of Agriculture (<http://www.nass.usda.gov/census/>), "Cattle" includes heifers, heifer calves, steers, bulls and bull calves; "Chickens" are layers 20 weeks and older; "Chickens Sold" are all chickens used to produce meat.

County	INVENTORY		REMOVAL RATE	
	Forest Land (thousand acres)	Timber Land (thousand acres)	Growing Stock (million cubic feet)	Sawtimber (million board feet)
Lawrence	199.8	199.8	6.6	27.1
Wayne	372.6	372.6	14.1	41.1
Totals	572.4	572.4	20.7	68.2

Table 4-18. Forest Acreage and Average Annual Removal Rates (1987-1994) in Subwatershed 0603000504.

CROPS	TONS/ACRE/YEAR
Corn (Row Crops)	6.80
Soybeans (Row Crops)	28.85
Cotton (Row Crops)	8.07
Grass (Hayland)	0.19
Legume/Grass (Hayland)	0.64
Grass (Pastureland)	0.23
Grass, Forbs, Legumes (Mixed Pasture)	0.43
Forest Land (Grazed)	0.00
Forest Land (Not Grazed)	0.00
Wheat (Close Grown Cropland)	14.15
All Other Close Grown Cropland	1.80
Conservation Reserve Program Land	0.90
Farmsteads and Ranch Headquarters	3.40
Other Cropland not Planted	13.55
Nonagricultural Land Use	0.00

Table 4-19. Annual Estimated Total Soil Loss in Subwatershed 0603000504.

4.2.D. 0603000505.

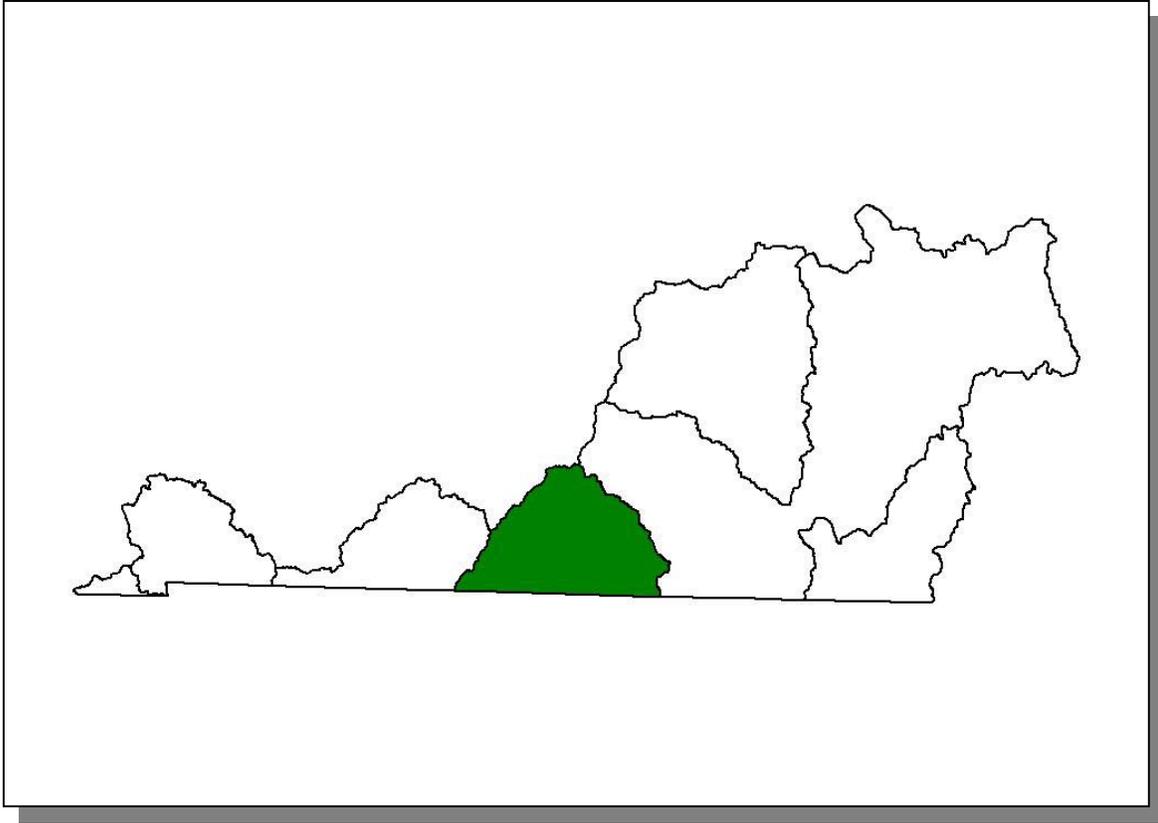


Figure 4-28. Location of Subwatershed 0603000505. All Pickwick HUC-10 subwatershed boundaries in Tennessee are shown for reference.

4.2.D.i. General Description.

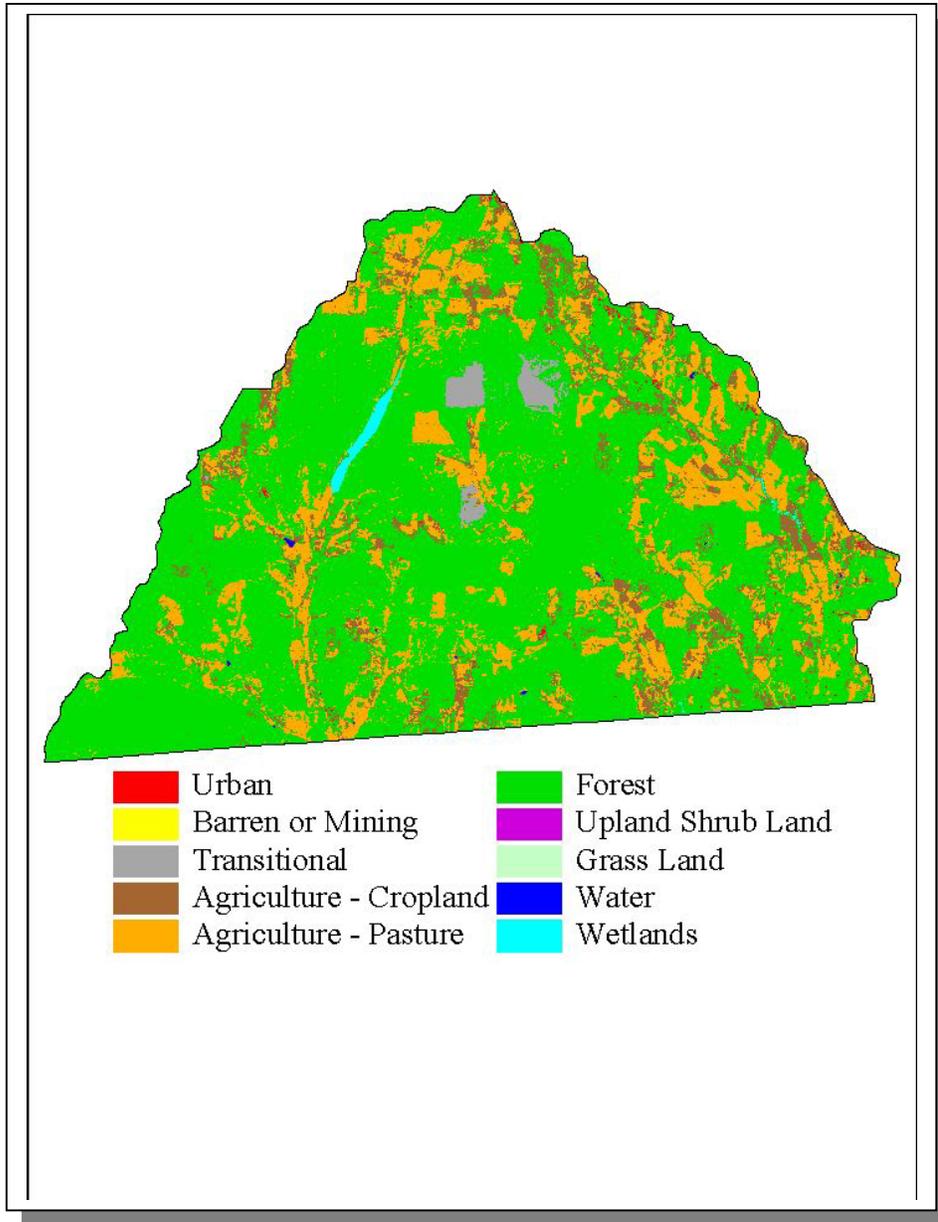


Figure 4-29. Illustration of Land Use Distribution in Subwatershed 0603000505.

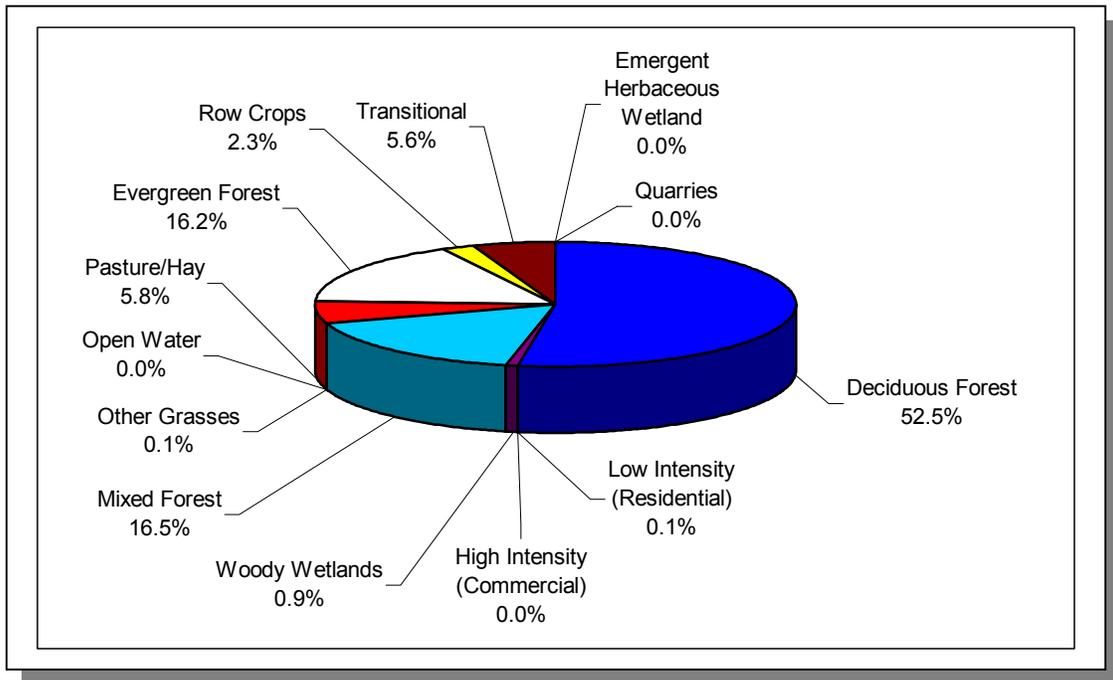


Figure 4-30. Land Use Distribution in Subwatershed 0603000505. More information is provided in Pickwick-Appendix IV.

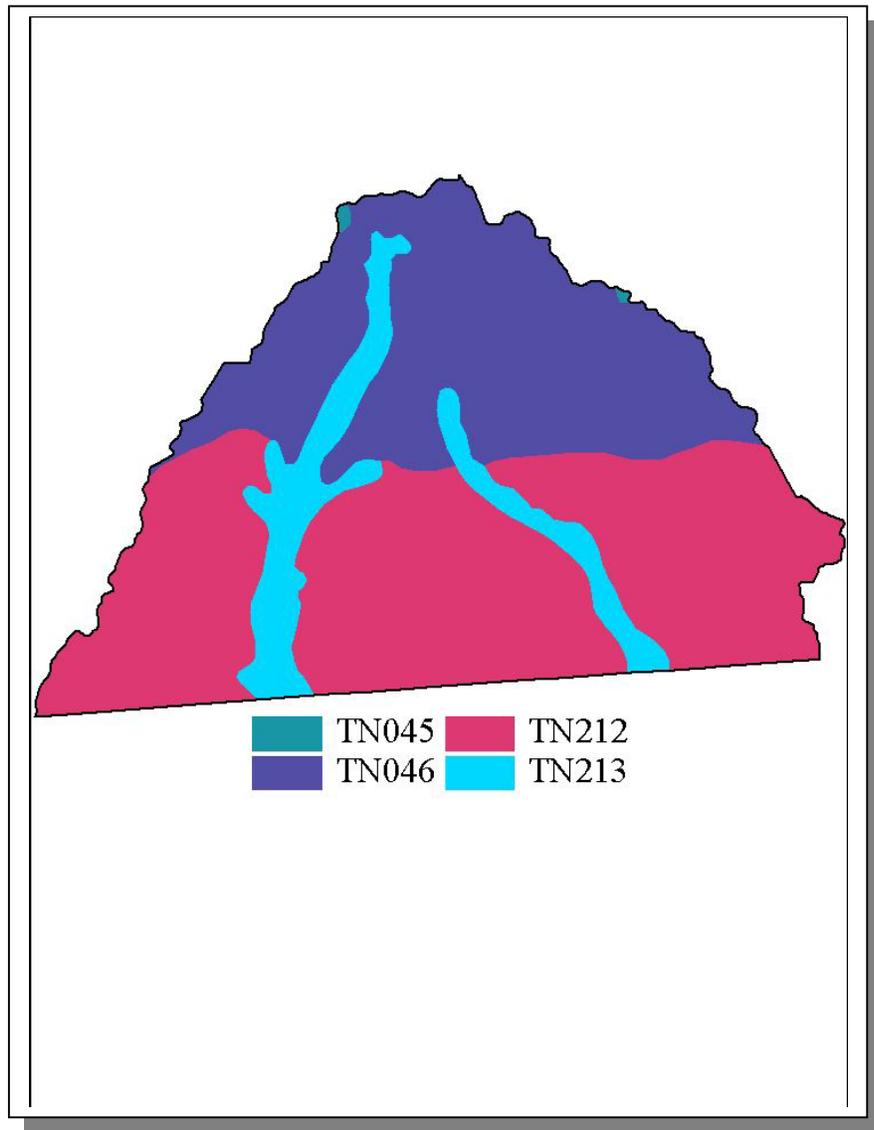


Figure 4-31. STATSGO (State Soil Geographic Database) Soil Map Units in Subwatershed 0603000505.

STATSGO MAP UNIT ID	PERCENT HYDRIC	HYDROLOGIC GROUP	PERMEABILITY (in/hr)	SOIL pH	ESTIMATED SOIL TEXTURE	SOIL ERODIBILITY
TN045	0.10	B	1.95	5.45	Loam	0.35
TN046	0.10	B	1.98	5.09	Silty Loam	0.38
TN212	12.00	B	1.95	5.04	Silty Loam	0.38
TN213	36.00	C	1.89	5.30	Loam	0.35

Table 4-20. Soil Characteristics by STATSGO (State Soil Geographic Database) Soil Map Units in Subwatershed 0603000505. More information is provided in Pickwick-Appendix IV.

County	COUNTY POPULATION		Portion of Watershed (%)	ESTIMATED POPULATION IN WATERSHED		PERCENT CHANGE
	1990	1997 Est.		1990	1997	
Wayne	13,935	16,498	8.06	1,123	1,329	18.3
Lauderdale	79,661	84,042	0.87	691	729	5.5
Total	93,596	100,540		1,814	2,058	13.5

Table 4-21. Population Estimates in Subwatershed 0603000505.

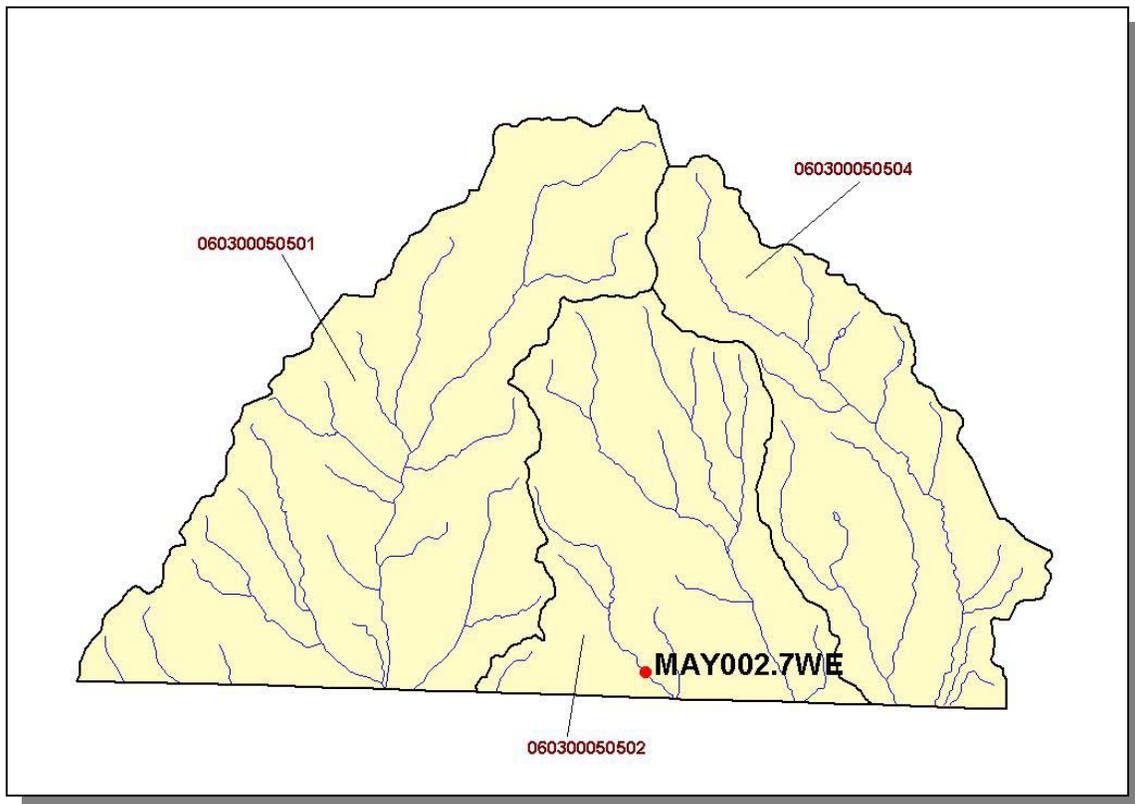


Figure 4-32. Location of STORET Monitoring Sites in Subwatershed 0603000505. Subwatershed 060300050501 and 060300050504 boundaries are shown for reference. More information is provided in Pickwick-Appendix IV.

4.2.D.ii. Point Source Contributions.

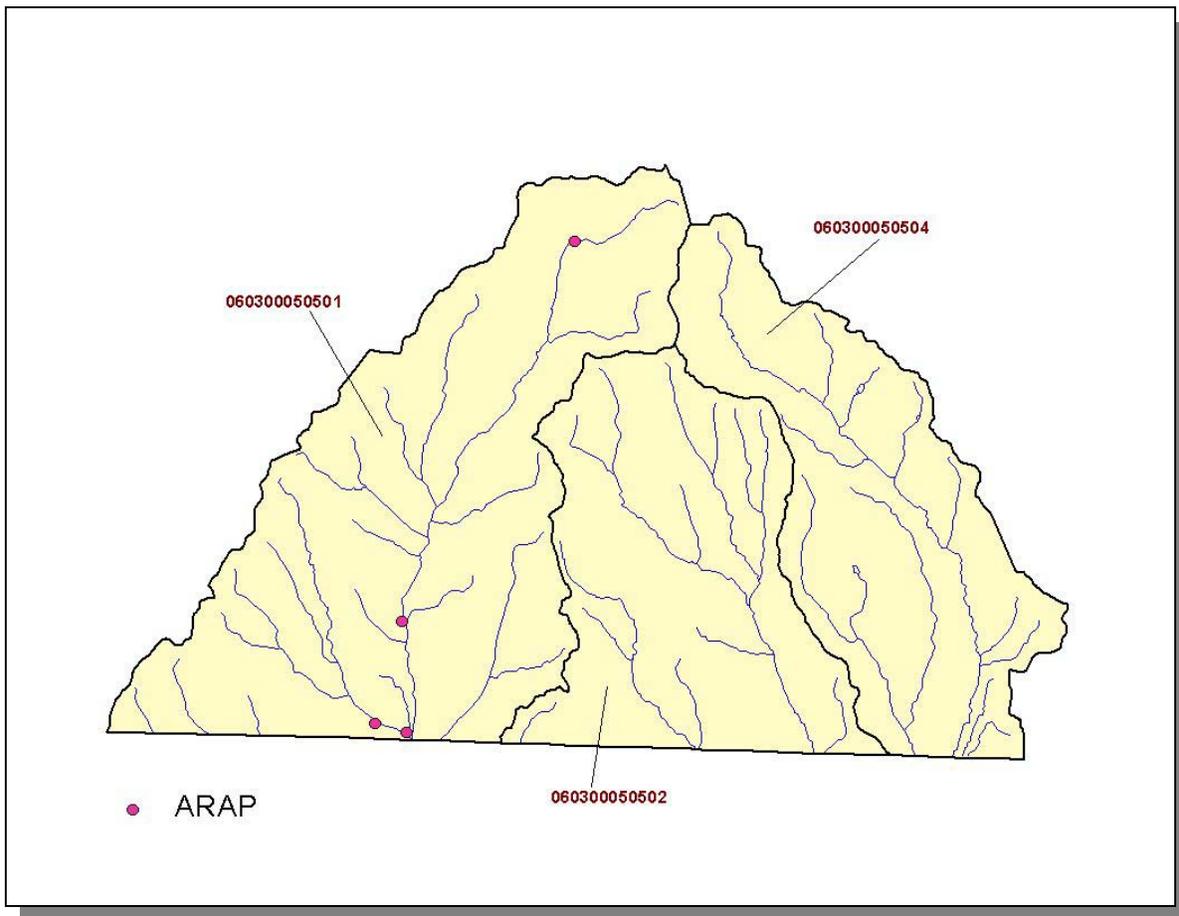


Figure 4-33. Location of Active Point Source Facilities in Subwatershed 0603000505. Subwatershed 060300050501 and 060300050504 boundaries are shown for reference. More information is provided in the following figures.

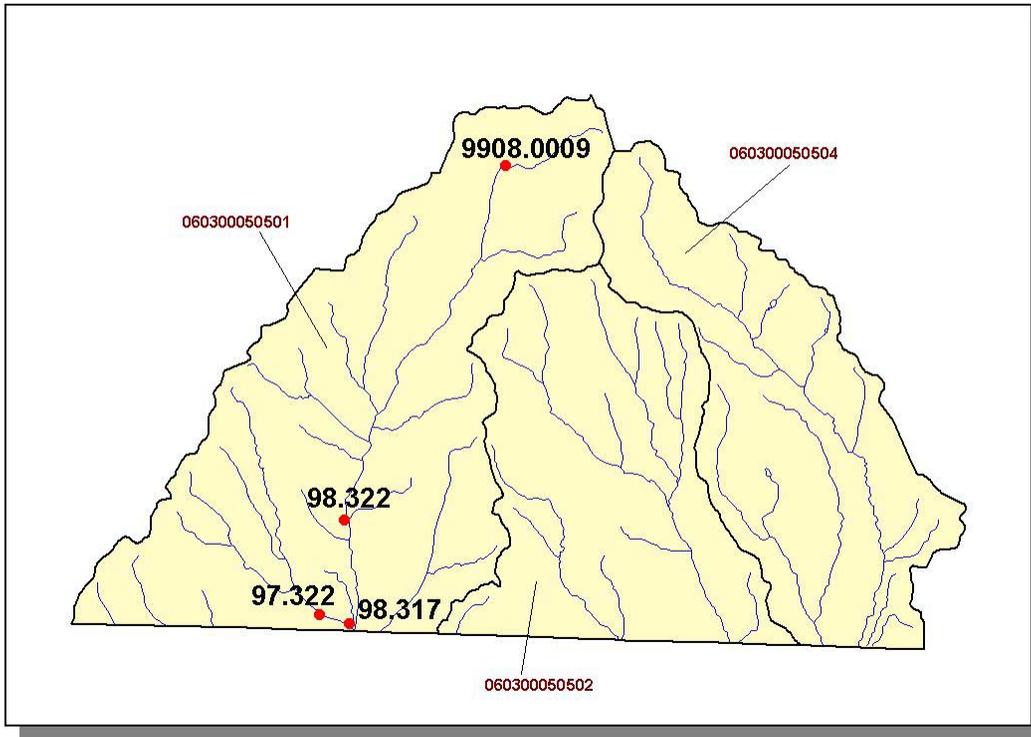


Figure 4-34. Location of ARAP Sites (Individual Permits) in Subwatershed 0603000505. Subwatershed 060300050501 and 060300050504 boundaries are shown for reference. More information is provided in Pickwick-Appendix IV.

4.2.D.iii. Nonpoint Source Contributions.

LIVESTOCK (COUNTS)						
Beef Cow	Milk Cow	Cattle	Chickens	Chickens Sold	Hogs	Sheep
2,437	<5	4,359	<5	8	449	24

Table 4-22. Summary of Livestock Count Estimates in Subwatershed 0603000505. According to the 1997 Census of Agriculture (<http://www.nass.usda.gov/census/>), "Cattle" includes heifers, heifer calves, steers, bulls and bull calves; "Chickens" are layers 20 weeks and older; "Chickens Sold" are all chickens used to produce meat.

County	INVENTORY		REMOVAL RATE	
	Forest Land (thousand acres)	Timber Land (thousand acres)	Growing Stock (million cubic feet)	Sawtimber (million board feet)
Wayne	372.6	372.6	14.1	14.1

Table 4-23. Forest Acreage and Average Annual Removal Rates (1987-1994) in Subwatershed 0603000505.

4.2.E. 0603000506.

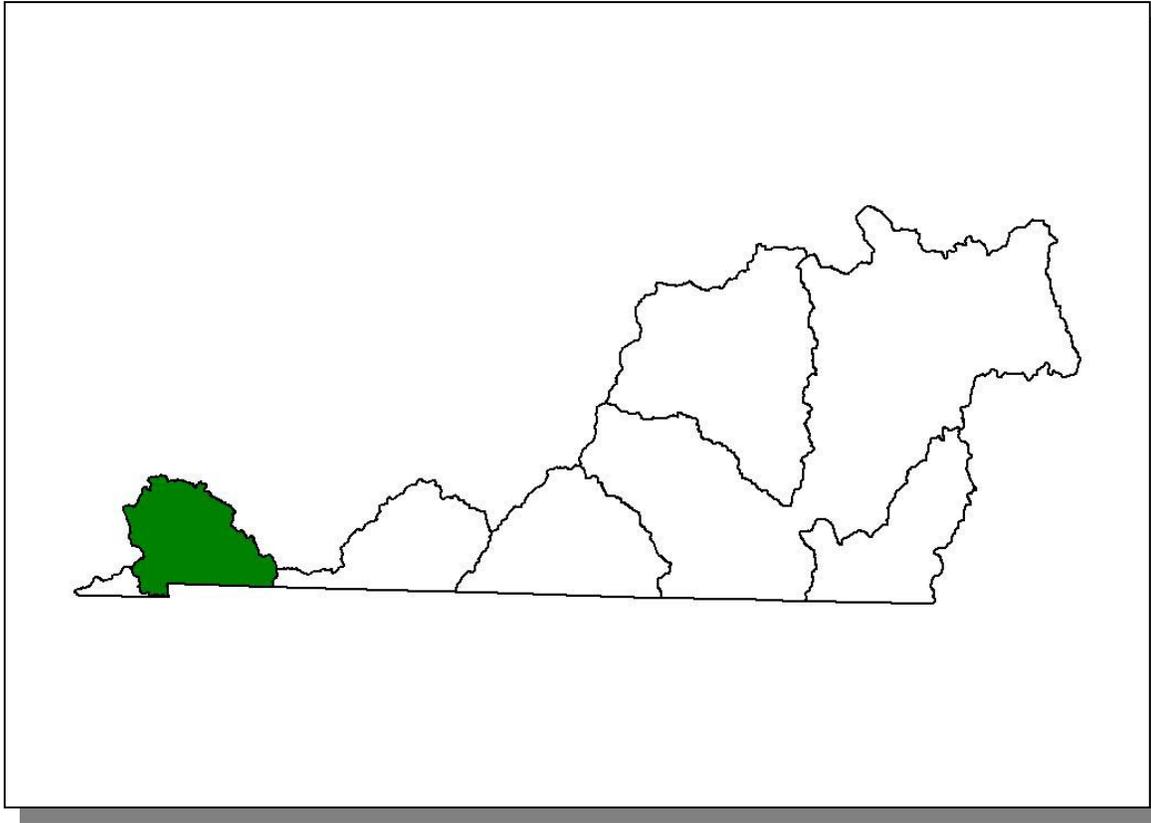


Figure 4-35. Location of Subwatershed 0603000506. All Pickwick HUC-10 subwatershed boundaries in Tennessee are shown for reference.

4.2.E.i. General Description.

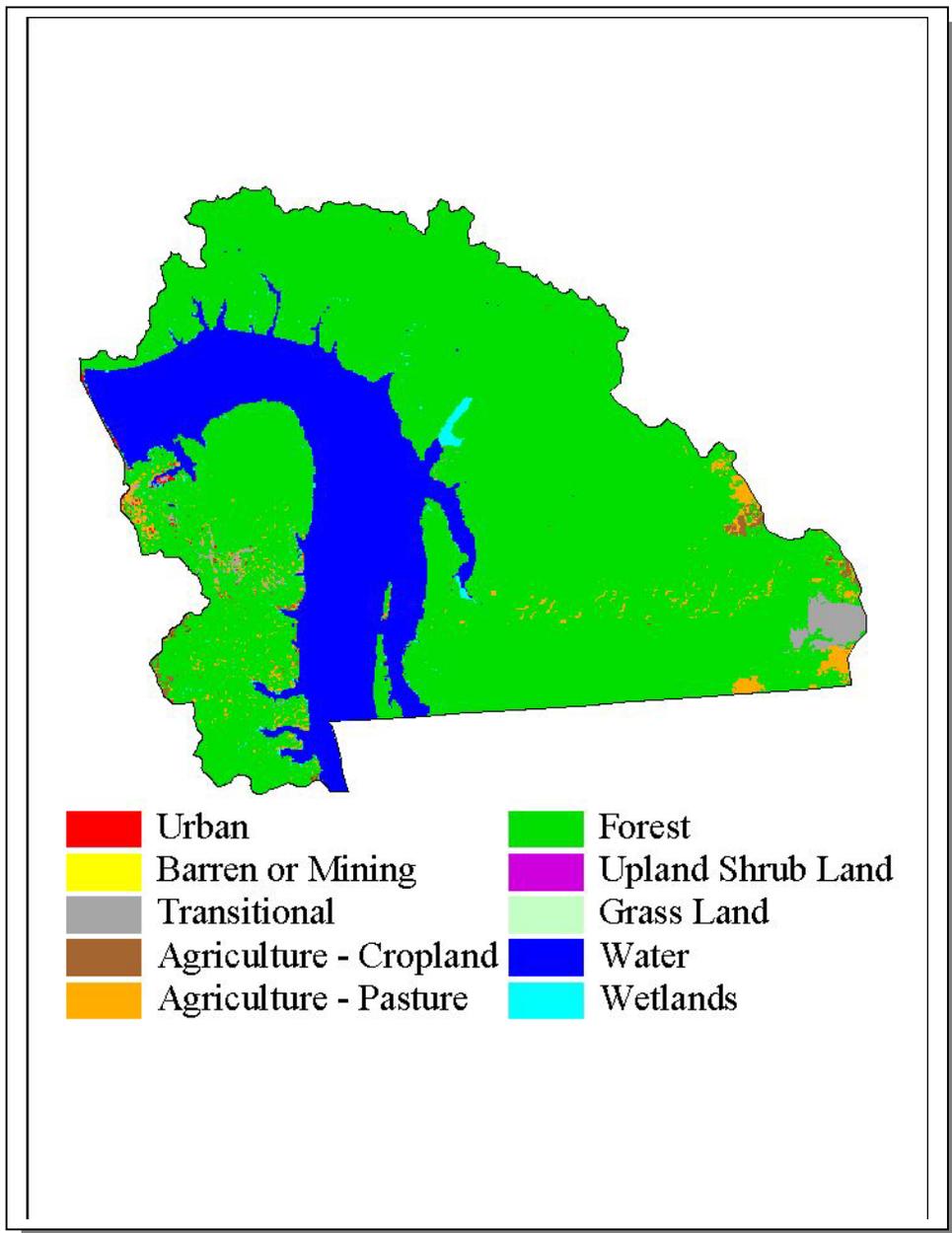


Figure 4-36. Illustration of Land Use Distribution in Subwatershed 0603000506.

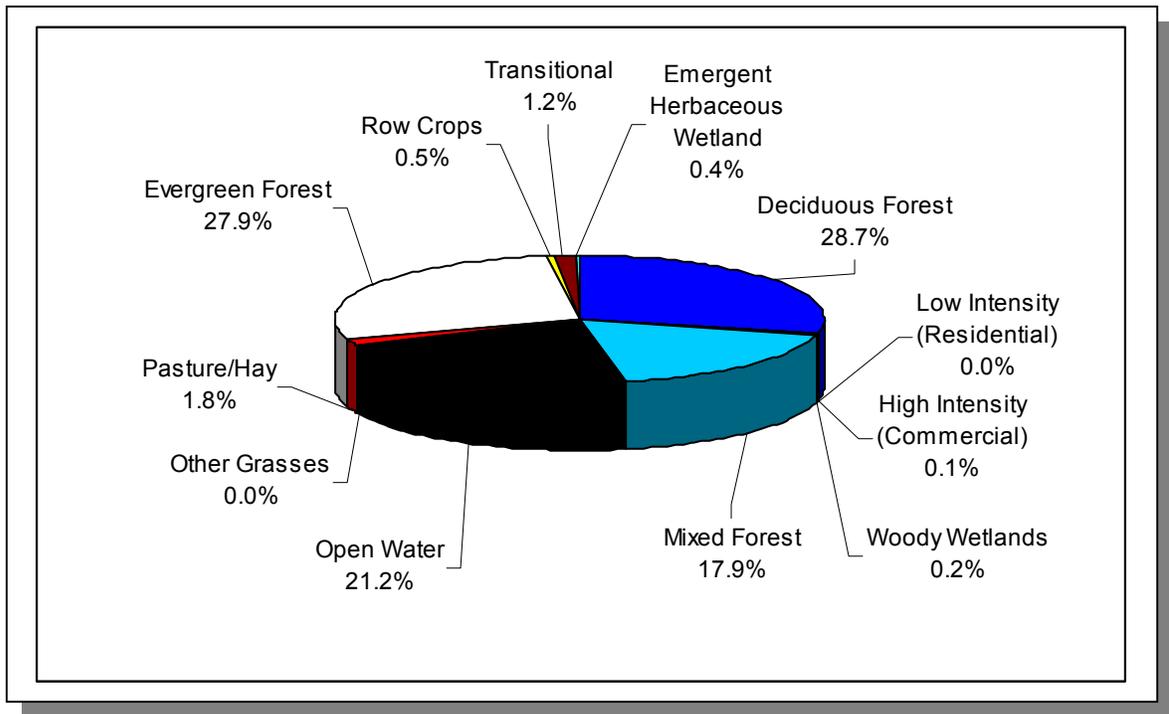


Figure 4-37. Land Use Distribution in Subwatershed 0603000506. More information is provided in Pickwick-Appendix IV.

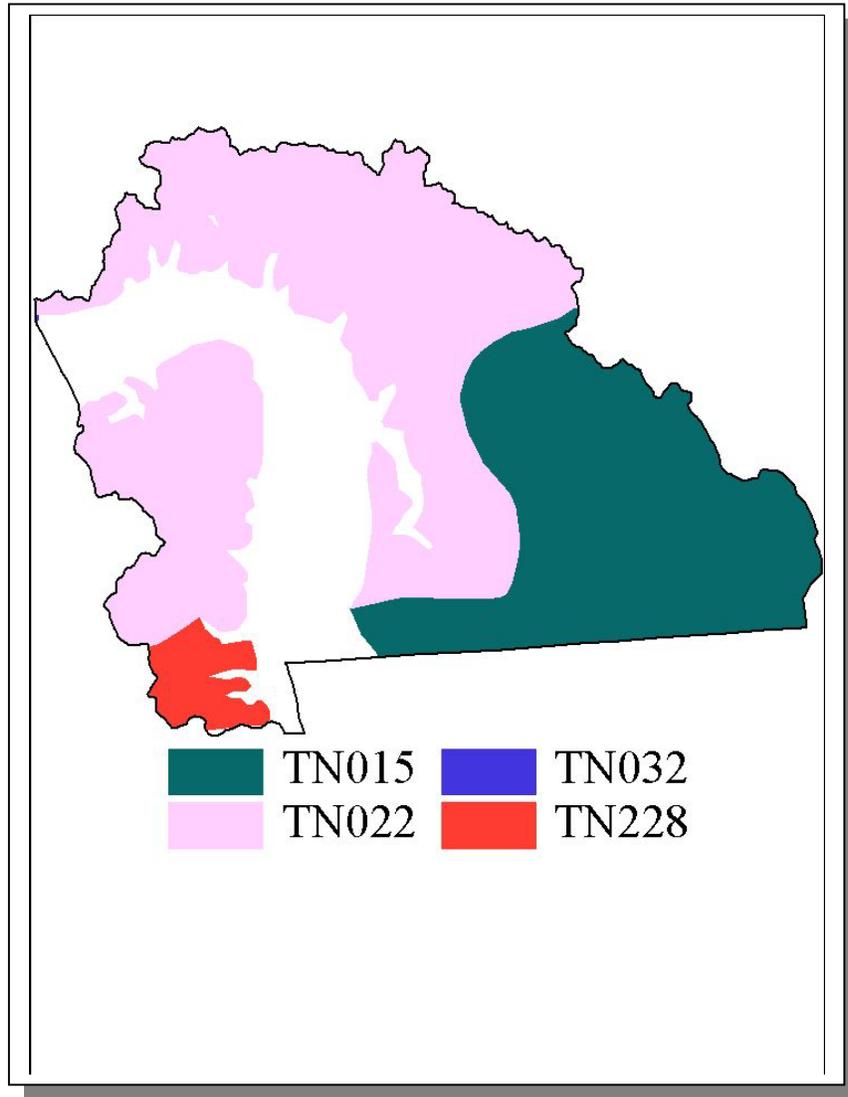


Figure 4-38. STATSGO (State Soil Geographic Database) Soil Map Units in Subwatershed 0603000506.

STATSGO MAP UNIT ID	PERCENT HYDRIC	HYDROLOGIC GROUP	PERMEABILITY (in/hr)	SOIL pH	ESTIMATED SOIL TEXTURE	SOIL ERODIBILITY
TN015	4.00	C	3.62	4.98	Sandy Loam	0.25
TN022	5.00	C	1.98	5.07	Loam	0.37
TN032	19.00	C	1.21	5.51	Silty Loam	0.37
TN228	1.00	B	3.32	5.09	Sandy Loam	0.28

Table 4-24. Soil Characteristics by STATSGO (State Soil Geographic Database) Soil Map Units in Subwatershed 0603000506. More information is provided in Pickwick-Appendix IV.

County	COUNTY POPULATION		Portion of Watershed (%)	ESTIMATED POPULATION IN WATERSHED		% CHANGE
	1990	1997 Est.		1990	1997	
Hardin	22,633	24,816	6.73	1,523	1,669	9.6

Table 4-25. Population Estimates in Subwatershed 0603000506.

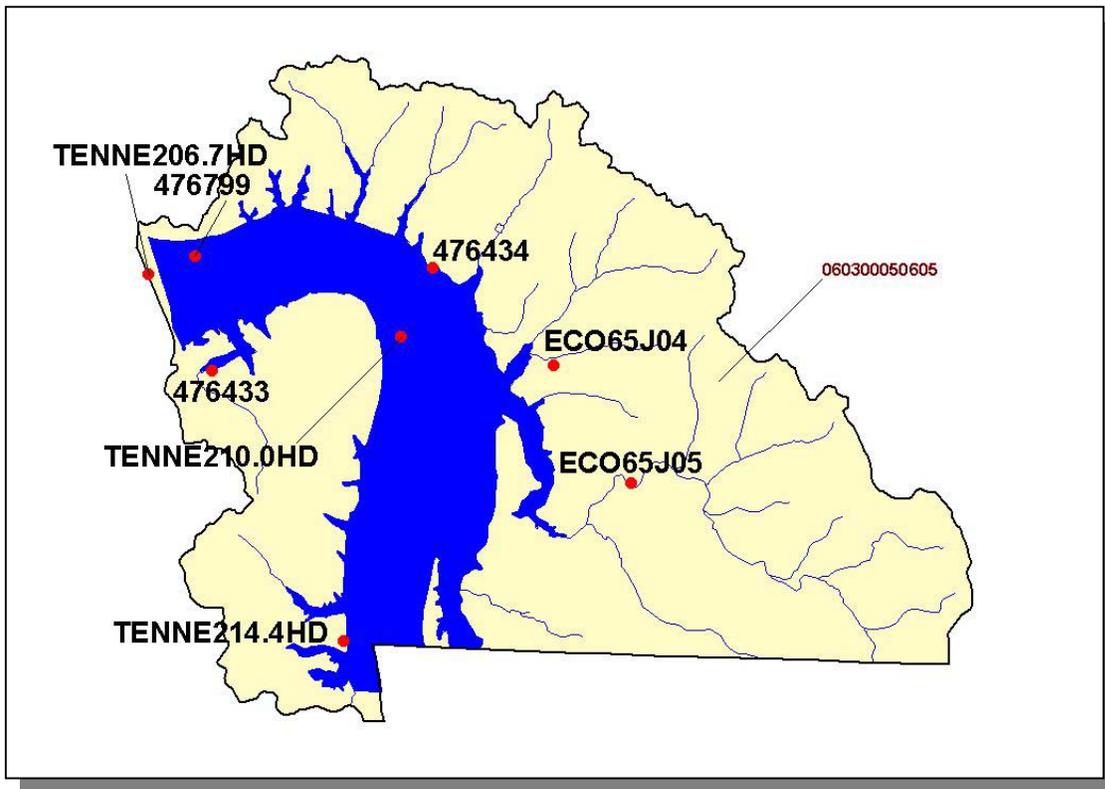


Figure 4-39. Location of STORET Monitoring Sites in Subwatershed 0603000506. More information is provided in Pickwick-Appendix IV.

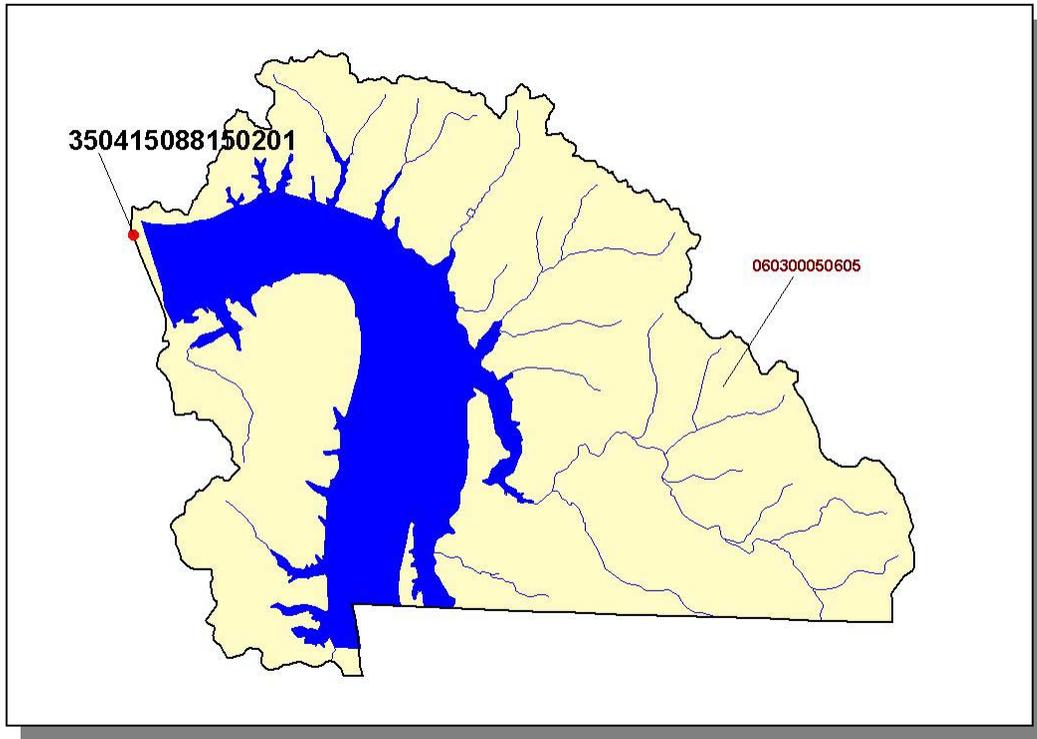


Figure 4-40. Location of Historical Streamflow Data Collection Sites in Subwatershed 0603000506. Subwatershed 06030005060 boundaries are shown for reference. More information is provided in Pickwick-Appendix IV.

4.2.E.ii. Point Source Contributions.

There are no point sources in subwatershed 0603000506.

4.2.E.iii. Nonpoint Source Contributions.

LIVESTOCK (COUNTS)						
Beef Cow	Milk Cow	Cattle	Chickens	Chickens Sold	Hogs	Sheep
49	0	95	0	1,806	21	1

Table 4-26. Summary of Livestock Count Estimates in Subwatershed 0603000506. According to the 1997 Census of Agriculture (<http://www.nass.usda.gov/census/>), "Cattle" includes heifers, heifer calves, steers, bulls and bull calves; "Chickens" are layers 20 weeks and older; "Chickens Sold" are all chickens used to produce meat.

County	INVENTORY		REMOVAL RATE	
	Forest Land (thousand acres)	Timber Land (thousand acres)	Growing Stock (million cubic feet)	Sawtimber (million board feet)
Hardin	219.9	219.9	6.5	27.6

Table 4-27. Forest Acreage and Annual Removal Rates (1987-1994) in Subwatershed 0603000506.

CROPS	TONS/ACRE/YEAR
Corn (Row Crops)	3.91
Soybeans (Row Crops)	13.10
Cotton (Row Crops)	2.63
Grass (Pastureland)	0.15
Grass, Forbs, Legumes (Mixed Pasture)	0.42
Grass (Hayland)	0.31
Legume/Grass (Hayland)	0.46
Forest Land (Grazed)	0.00
Forest Land (Not Grazed)	0.00
Wheat (Close Grown Cropland)	3.93
All Other Close Grown Cropland	5.50
Conservation Reserve Program Land	0.35
Other Cropland not Planted	9.54
Non Agricultural Land Use	0.00
Farmsteads and Ranch Headquarters	0.36

Table 4-28. Annual Estimated Soil Loss in Subwatershed 0603000506.

4.2.F. 0603000507

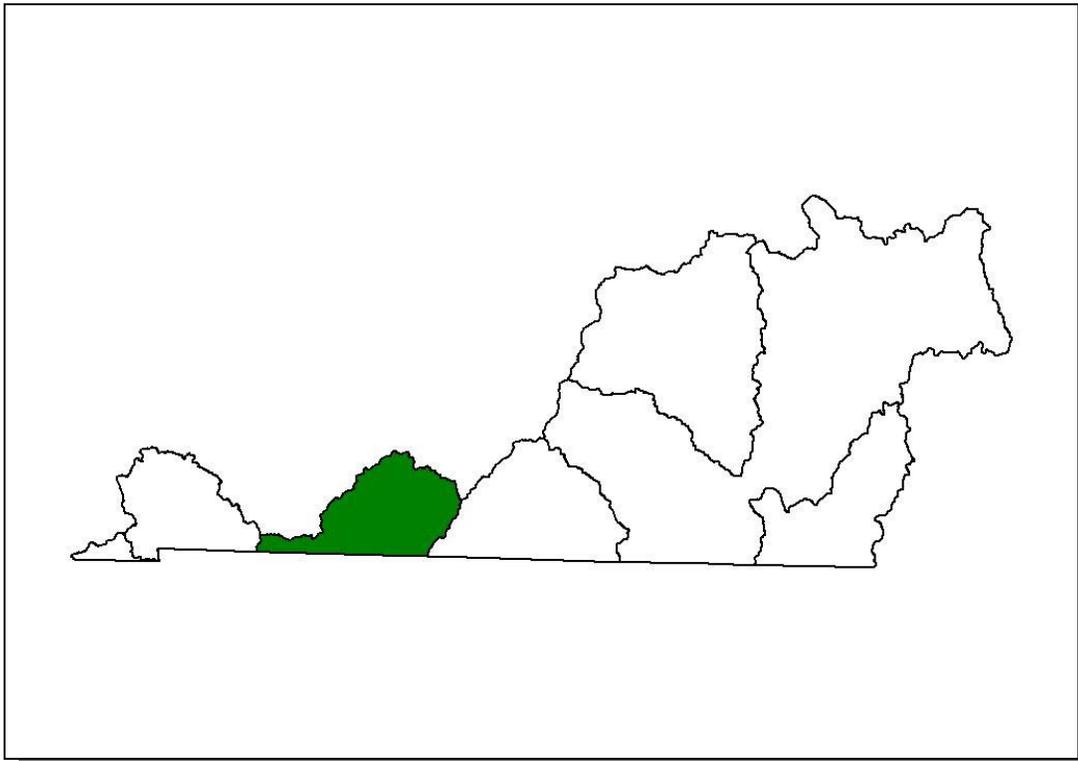


Figure 4-41. Location of Subwatershed 0603000507. All Pickwick HUC-10 subwatershed boundaries in Tennessee are shown for reference.

4.2.F.i. General Description.

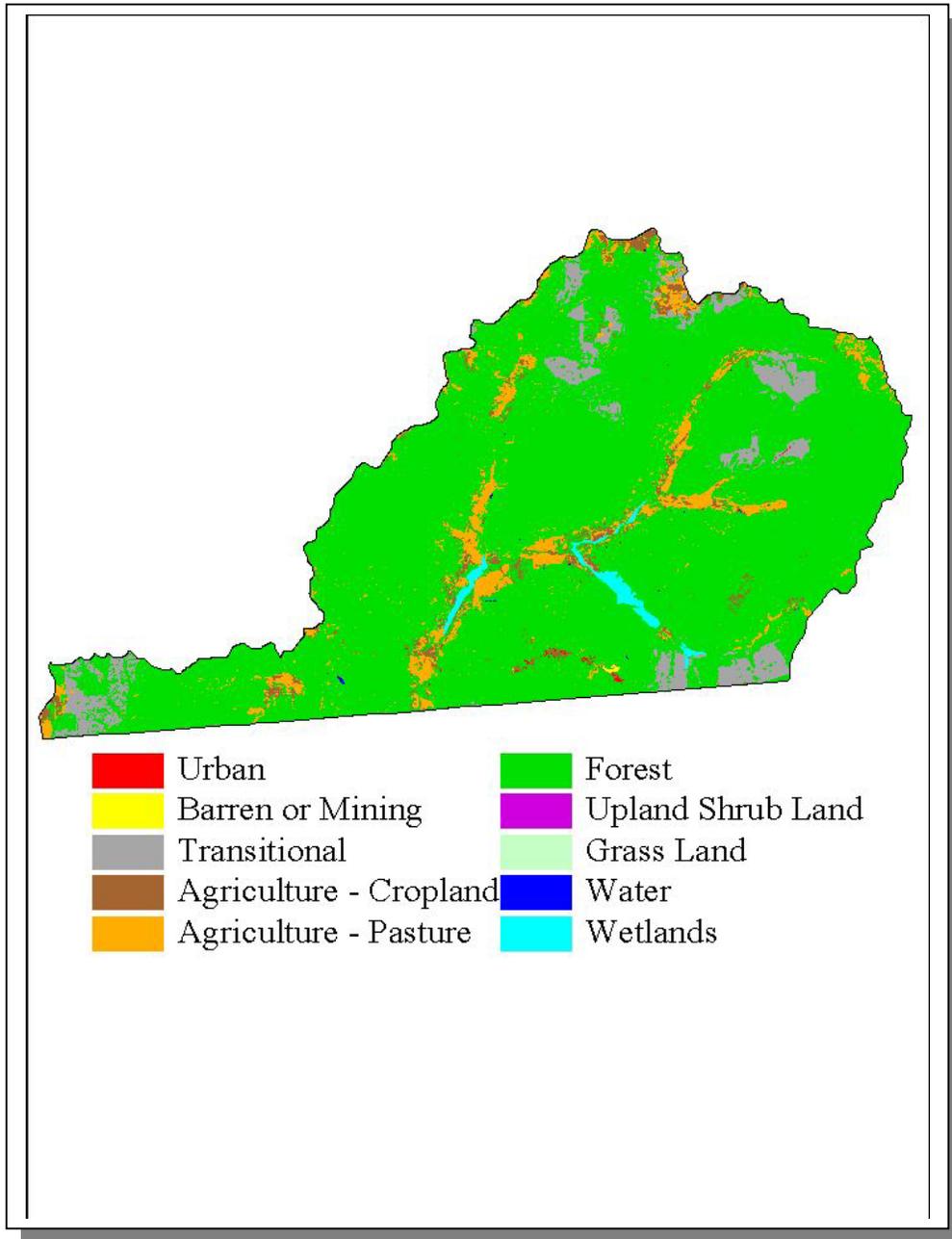


Figure 4-42. Illustration of Land Use Distribution in Subwatershed 0603000507.

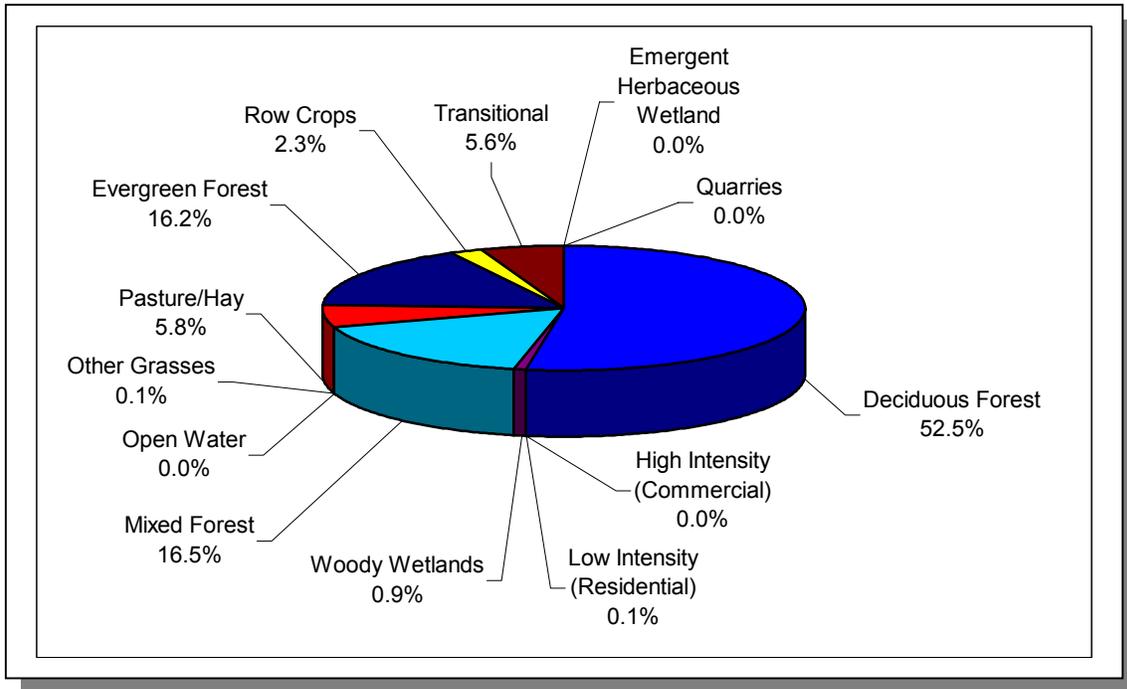


Figure 4-43. Land Use Distribution in Subwatershed 0603000507. More information is provided in Pickwick-Appendix IV.

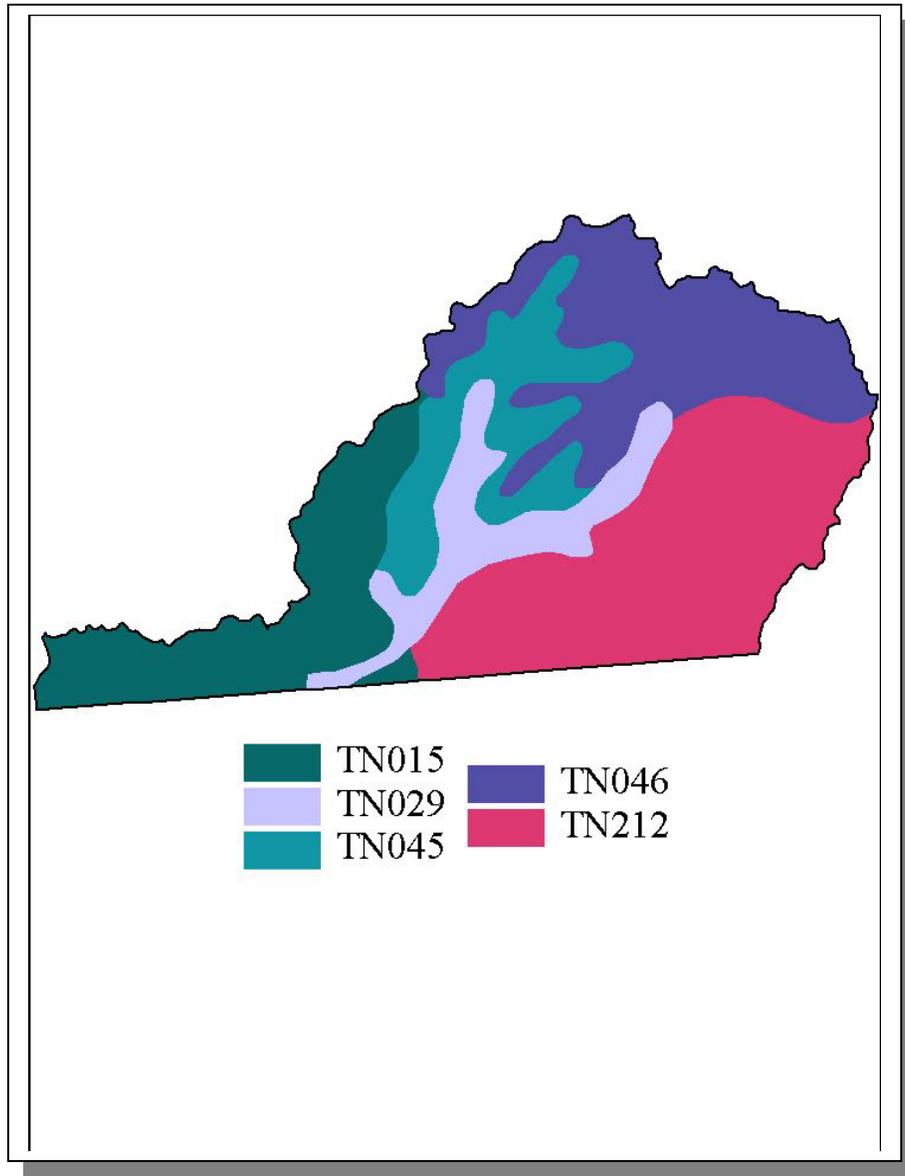


Figure 4-44. STATSGO (State Soil Geographic Database) Soil Map Units in Subwatershed 0603000507.

STATSGO MAP UNIT ID	PERCENT HYDRIC	HYDROLOGIC GROUP	PERMEABILITY (in/hr)	SOIL pH	ESTIMATED SOIL TEXTURE	SOIL ERODIBILITY
TN015	4.00	C	3.62	4.98	Sandy Loam	0.25
TN029	8.00	C	2.96	5.40	Loam	0.33
TN045	0.00	B	1.95	5.45	Loam	0.35
TN046	0.00	B	1.98	5.09	Silty Loam	0.38
TN212	4.00	B	1.95	5.04	Silty Loam	0.38

Table 4-29. Soil Characteristics by STATSGO (State Soil Geographic Database) Soil Map Units in Subwatershed 0603000507. More information is provided in Pickwick-Appendix IV.

County	TOTAL COUNTY POPULATION		Portion of Watershed (%)	ESTIMATED POPULATION IN WATERSHED		PERCENT CHANGE
	1990	1997 Est.		1990	1997	
Hardin	22,633	24,816	1.14	257	282	9.7
Wayne	13,935	16,498	4.76	664	786	18.4
Totals	36,568	41,314		921	1,068	16.0

Table 4-30. Population Estimates in Subwatershed 0603000507.

4.2.F.ii. Point Source Contributions.

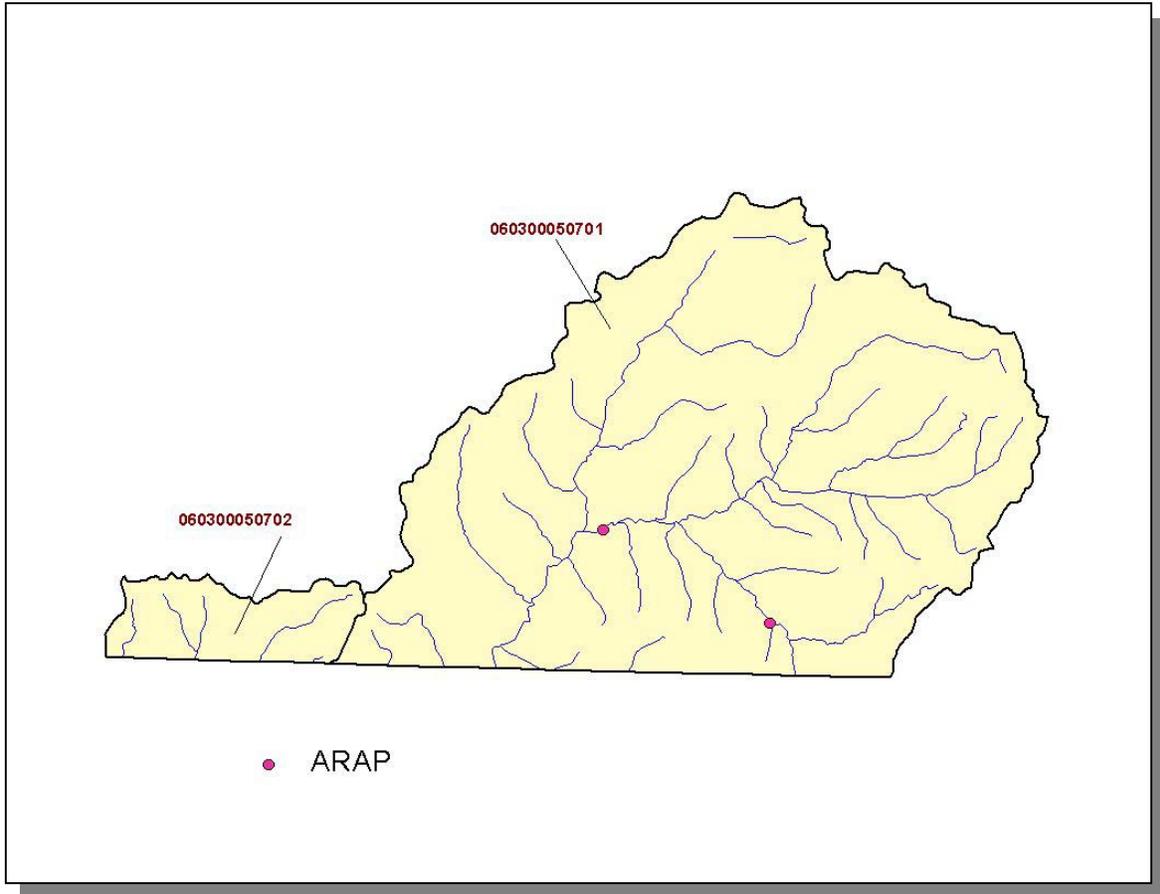


Figure 4-45. Location of Active Point Source Facilities in Subwatershed 0603000507. Subwatershed 060300050701 and 060300050702 boundaries are shown for reference. More information is provided in the following figures.

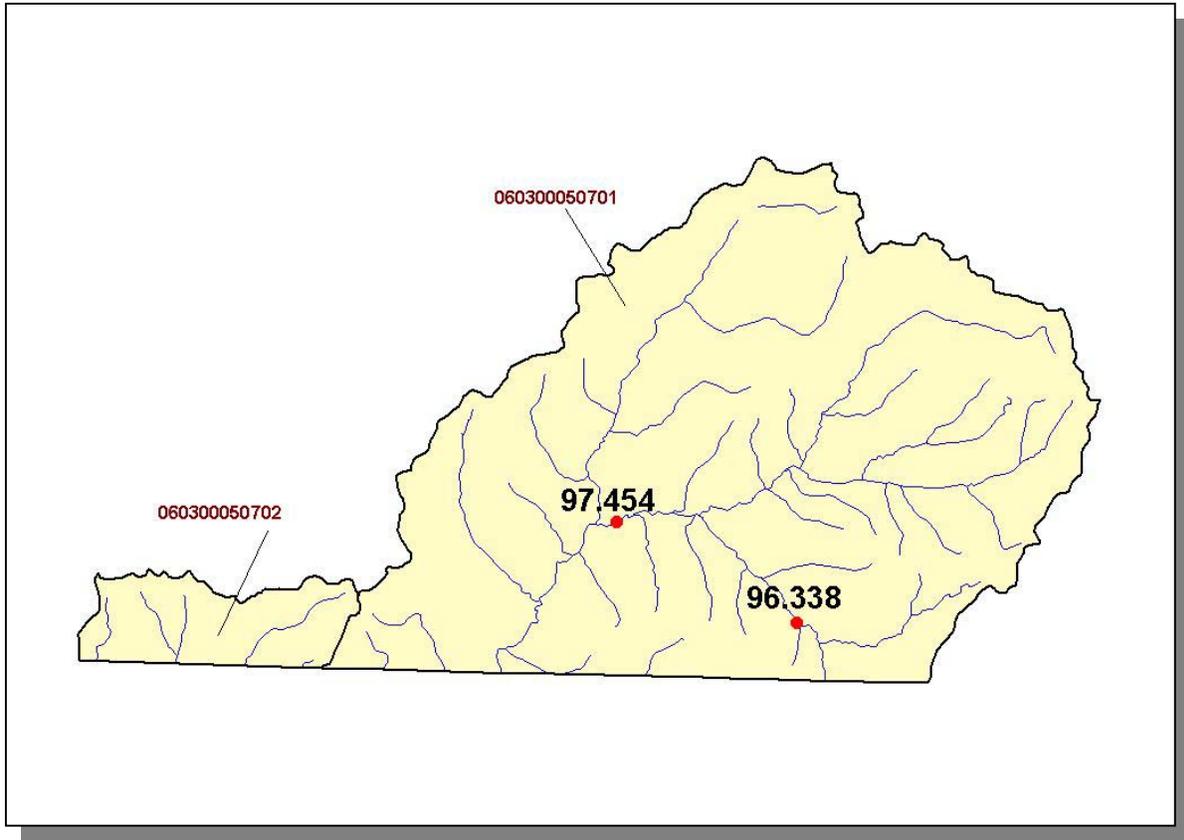


Figure 4-46. Location of ARAP Sites (Individual Permits) in Subwatershed 0603000507. Subwatershed 060300050701 and 060300050702 boundaries are shown for reference. More information, including the names of facilities, is provided in Pickwick-Appendix IV.

4.2.F.iii. Nonpoint Source Contributions.

LIVESTOCK (COUNTS)						
Beef Cow	Milk Cow	Cattle	Chickens	Chickens Sold	Hogs	Sheep
534	2	959	1	4,198	101	6

Table 4-31. Summary of Livestock Count Estimates in Subwatershed 0603000507. According to the 1997 Census of Agriculture (<http://www.nass.usda.gov/census/>), "Cattle" includes heifers, heifer calves, steers, bulls and bull calves; "Chickens" are layers 20 weeks and older; "Chickens Sold" are all chickens used to produce meat.

County	INVENTORY		REMOVAL RATE	
	Forest Land (thousand acres)	Timber Land (thousand acres)	Growing Stock (million cubic feet)	Sawtimber (million board feet)
Hardin	219.9	219.9	6.5	27.6
Wayne	372.6	372.6	14.1	41.1
Total	592.5	592.5	20.6	68.7

Table 4-32. Forest Acreage and Average Annual Removal Rates (1987-1994) in Subwatershed 0603000507.

CROPS	TONS/ACRE/YEAR
Grass (Hayland)	0.21
Legume/Grass (Hayland)	0.46
Grass (Pastureland)	0.21
Grass, Forbs, Legumes (Mixed (Pasture)	0.65
Forest Land (Grazed)	0.00
Forest Land (Not Grazed)	0.00
Soybeans (Row Crops)	13.10
Corn (Row Crops)	7.30
Cotton (Row Crops)	2.63
Wheat (Close Grown Cropland)	3.93
All Other Close Grown Cropland	5.50
Conservation Reserve Program Land	0.35
Other Cropland not Planted	9.54
Non Agricultural Land Use	0.00
Farmsteads and Ranch Headquarters	0.79

Table 4-33. Annual Estimated Total Soil Loss in Subwatershed 0603000507.

4.2.G. 0603000508.

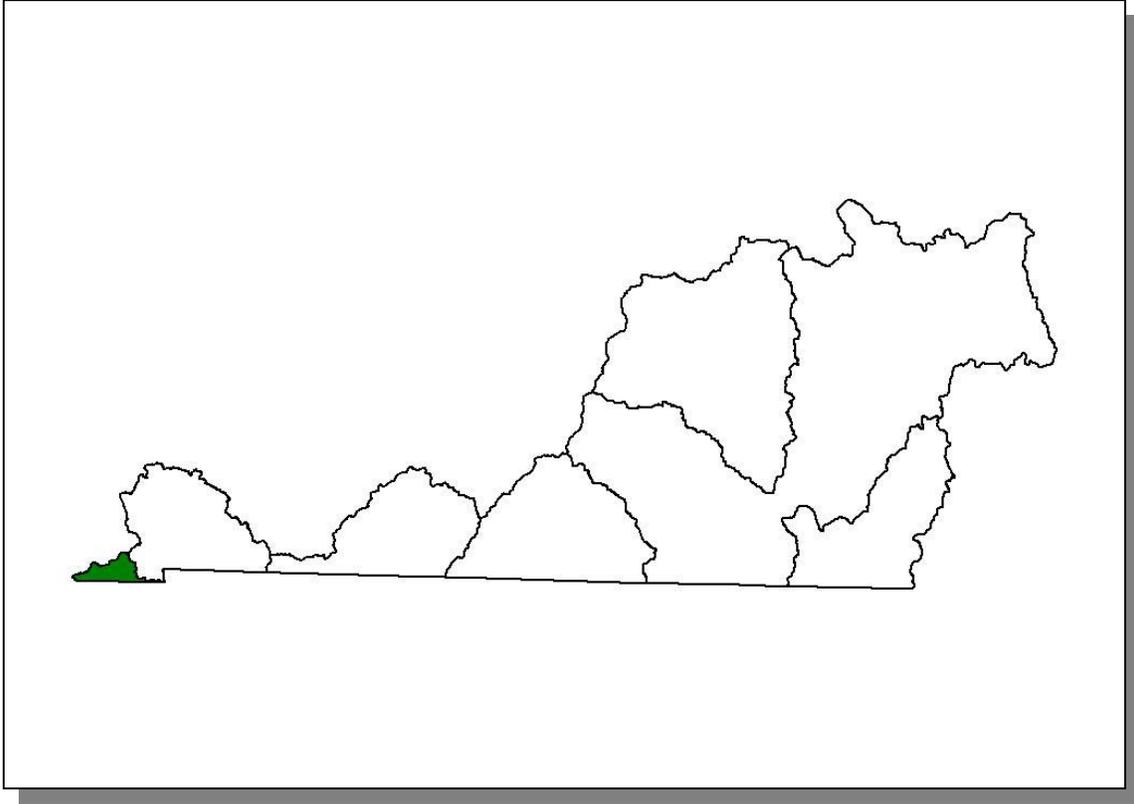


Figure 4-47. Location of Subwatershed 0603000508. All Pickwick HUC-10 subwatershed boundaries in Tennessee are shown for reference.

4.2.G.i. General Description.

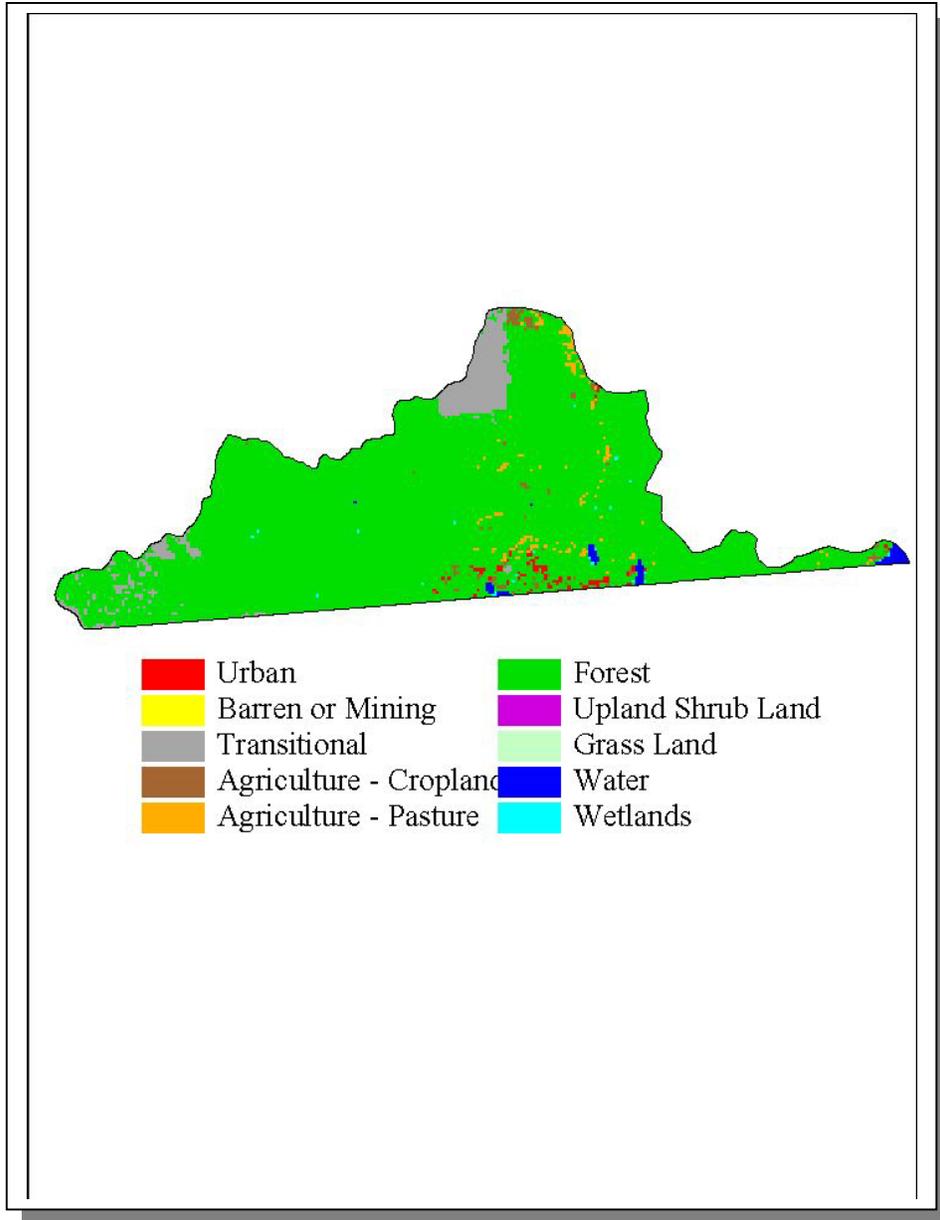


Figure 4-48. Illustration of Land Use Distribution in Subwatershed 0603000508.

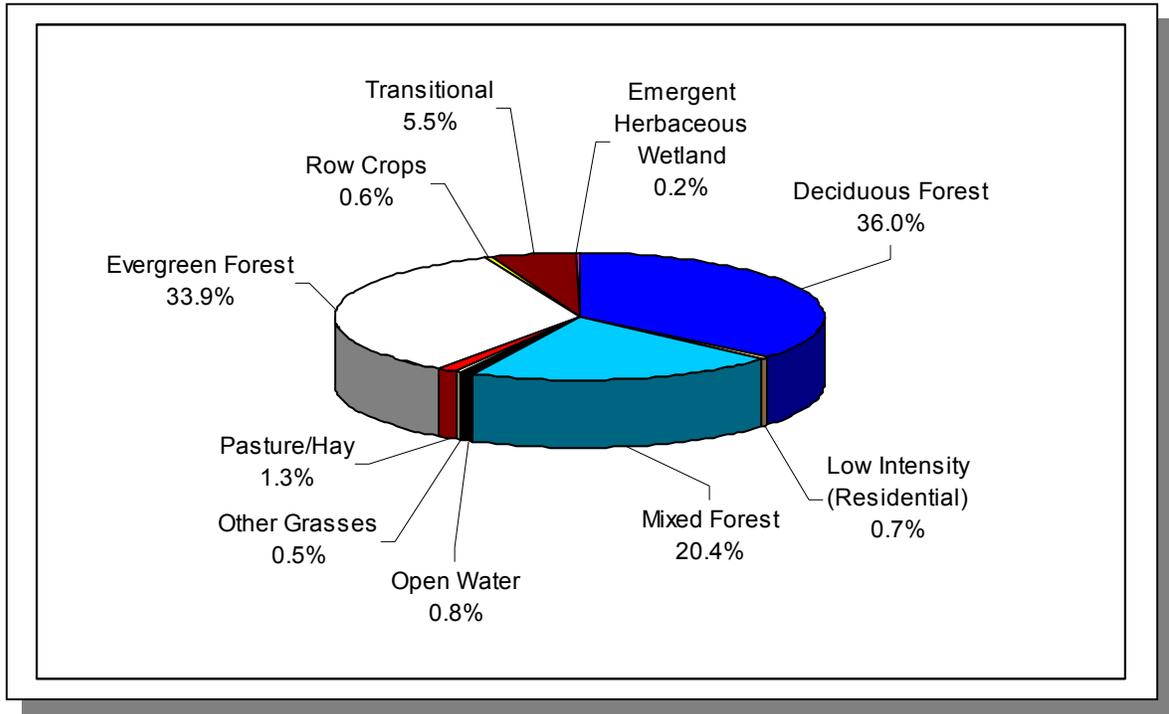


Figure 4-49. Land Use Distribution in Subwatershed 0603000508. More information is provided in Pickwick-Appendix IV.

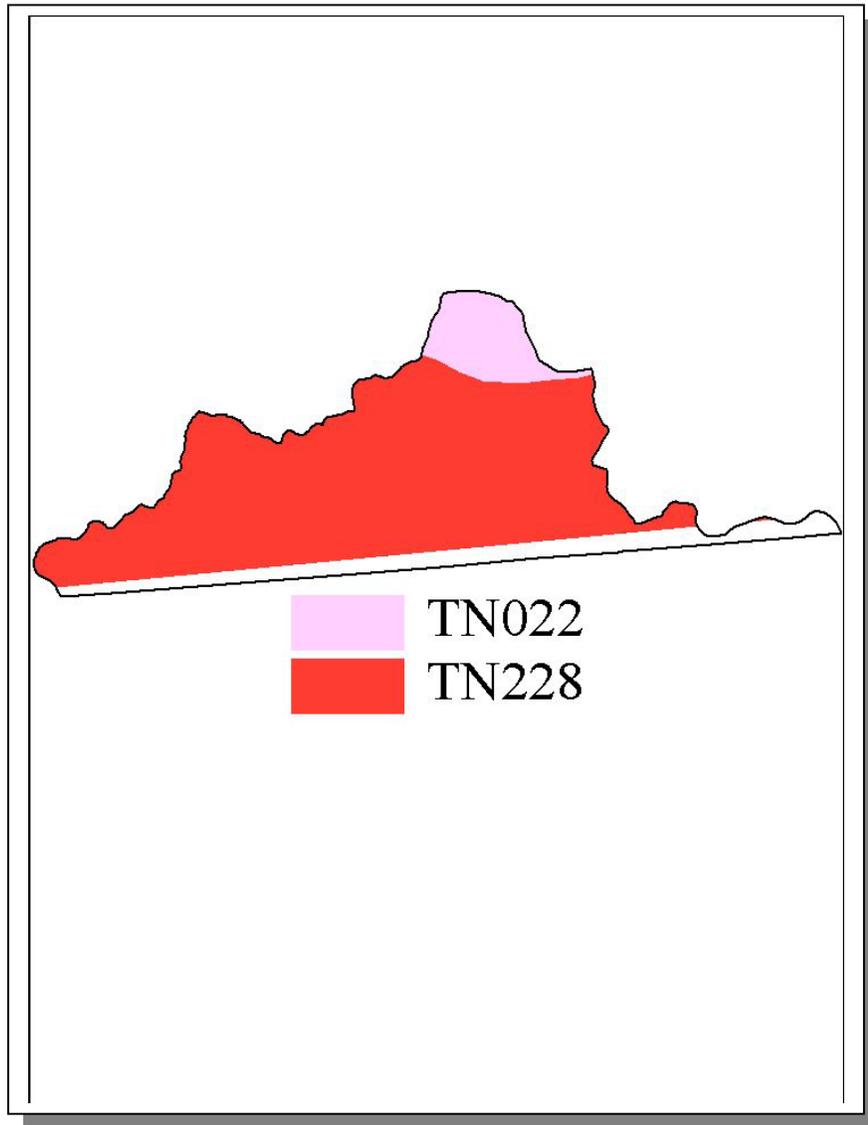


Figure 4-50. STATSGO (State Soil Geographic Database) Soil Map Units in Subwatershed 0603000508.

STATSGO MAP UNIT ID	PERCENT HYDRIC	HYDROLOGIC GROUP	PERMEABILITY (in/hr)	SOIL pH	ESTIMATED SOIL TEXTURE	SOIL ERODIBILITY
TN022	5.00	C	1.98	5.07	Loam	0.37
TN228	1.00	B	3.32	5.09	Sandy Loam	0.28

Table 4-34. Soil Characteristics by STATSGO (State Soil Geographic Database) Soil Map Units in Subwatershed 0603000508. More information is provided in Pickwick-Appendix IV.

County	COUNTY POPULATION		Portion of Watershed (%)	ESTIMATED POPULATION IN WATERSHED		% CHANGE
	1990	1997 Est.		1990	1997	
Hardin	22,633	24,816	0.34	77	84	9.1

Table 4-35. Population Estimates in Subwatershed 0603000508.

4.2.G.ii. Point Source Contributions.

There are no point sources in subwatershed 0603000508.

4.2.G.iii. Nonpoint Source Contributions.

LIVESTOCK (COUNTS)						
Beef Cow	Cattle	Milk Cow	Chickens	Chickens Sold	Hogs	Sheep
<5	7	0	0	0	<5	0

Table 4-36. Summary of Livestock Count Estimates in Subwatershed 0603000508. According to the 1997 Census of Agriculture (<http://www.nass.usda.gov/census/>), "Cattle" includes heifers, heifer calves, steers, bulls and bull calves; "Chickens" are layers 20 weeks and older; "Chickens Sold" are all chickens used to produce meat.

County	INVENTORY		REMOVAL RATE	
	Forest Land (thousand acres)	Timber Land (thousand acres)	Growing Stock (million cubic feet)	Sawtimber (million board feet)
Hardin	219.9	219.9	6.5	27.6

Table 4-37. Forest Acreage and Average Removal Rates (1987-1994) in Subwatershed 0603000508.

CROPS	TONS/ACRE/YEAR
Grass (Hayland)	0.31
Legume/Grass (Hayland)	0.46
Grass (Pastureland)	0.15
Grass, Forbs, Legumes (Mixed Pasture)	0.42
Forest Land (Grazed)	0.00
Forest Land (Not Grazed)	0.00
Corn (Row Crops)	3.91
Soybeans (Row Crops)	13.10
Cotton (Row Crops)	2.63
Wheat (Close Grown Cropland)	3.93
All Other Close Grown Cropland	5.50
Conservation Reserve Program Land	0.35
Farmsteads and Ranch Headquarters	0.36
Other Cropland not Planted	9.54
Nonagricultural Land Use	0.00

Table 4-38. Annual Estimated Total Soil Loss in Subwatershed 0603000508.